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ARIZONA
LABOR MARKET INFORMATION

NEWSLETTER

Vol. IX No. 11
November 1985

Unemployment Rate

Seasonally Adjusted
September*

ARIZONA	6.6%
Maricopa Co.	5.2%
Pima Co.	5.4%
UNITED STATES	7.1%

Consumer Price Index

National-August
1967 - Base Year

Wage Earner/Clerical Worker -	319.6
% Chg. Yr. Ago	3.0
All Urban -	323.5
% Chg. Yr. Ago	3.4

Phoenix-3rd Qtr.
1977 - Base Year

All Urban -	191.4
% Chg. Yr. Ago	4.5

Producer Price Index

National-September*
1967 - Base Year

All Commodities	305.8
% Chg. Yr. Ago	-1.1
Finished Goods	290.2
% Chg. Yr. Ago	0.2

* Preliminary

Employment and disability

Individuals with disabilities represent a large, heterogeneous, and almost undefinable part of the population in Arizona. Organizations and individuals in need of tabulated summaries for future planning would agree that numerical estimates are very hard to obtain because of the prevalent cloudiness surrounding definitions and characteristics of handicapped individuals.

This article will present a condensed profile of the people with work disabilities in Arizona according to the 1980 Census. It will also explore the reasons for the largely underutilized labor pool of handicapped individuals despite government intervention. It will point out various ways to successfully overcome obstacles to hiring persons with disabilities while describing the benefits employers and employees stand to gain in the process.

Impairment ≠ Disability ≠ Handicap

Awareness about the difference between these terms is needed because too often confusion arises resulting in misleading interpretations.

- Impairment: the temporal or permanent loss or defect of any structure, function (including mental), or system in the body, resulting from any cause (organ-level disturbance), e.g., skeletal.
- Disability: the objective experience as a consequence of impairments in terms of functional performance in daily activities (person-level disturbance), e.g., walking.
- Handicap: the social and environmental consequences for the individual as a result of impairments or disabilities

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Arizona Labor Market Information Newsletter
WINNER OF THE ICESA 1985 LMI PUBLICATION AWARD

Nancy Augustin, editor
Processed by RA Clerical Support Unit

(group-level responses -- disadvantage), e.g., mobility.

Nearly 9.1 percent of non-institutionalized individuals between 16-64 years of age have work disabilities.

In 1980, 155,360 non-institutionalized adults between 16-64 years of age identified themselves as having a disability, limiting their ability to work. Of that number, 50 percent were prevented from working as a direct result of their disability, while 75 percent of the individuals not prevented from working were in the labor force.

The size of the group in itself would generate special interest from an economic point of view, but the consequences of having work disabilities are serious not only for the individuals involved but to society as a whole. In the presence of disability, earnings are curtailed or eliminated and income is lowered, accompanying a series of personal problems arising from the loss of work status and independence. The economy also suffers when useful skills go underutilized, and the government's transfer payments increase accordingly with the income supplements needed.

Individuals with work disabilities were only about two-thirds as likely to be in the labor force as those with no work disabilities.

The presense of a work disability has a negative impact on the likelihood of labor force participation, often as a result of discouragement or preconceived doubts surrounding their ability to qualify for a job. Technological advancements are facilitating and gradually increasing the participation of individuals with disabilities in the labor force. Severely limited individuals are able to work by taking advantage of the technological adaptations of workplaces such as a TDD (telecommunications device for the deaf) or TTY (teletypewriters) also for the deaf, enabling them to communicate in the absence of interpreters. Gradually, more companies are relying on computer specialists who are able to do the job without having to leave their place of residence -- the ideal situation for a person with limited mobility.

Among all persons in the labor force, those with work disabilities had a greater chance of being unemployed and of earning lower incomes.

The unemployment rate for people with work disabilities is 4.1 percentage points higher than those with no work disabilities.

The unemployment rate reached 10.3 percent for people with work disabilities while the rest of the labor force suffered only a 6.2 percent unemployment rate in 1980. This leads one to believe that a major obstacle to equitable employment opportunities for people with handicaps (regardless of the law or any competitive qualifications) is the employer's perception of the capability of the prospective employee to do the job well.

Enormous progress is being made year after year in altering the attitudes of hiring personnel to make them evaluate a person with disabilities in terms of their skills, knowledge, and previous employment records. However, there are still many who, because of lack of exposure to handicapped individuals' abilities, can only evaluate them in terms of their limitations for the job.

Nearly 20 percent of those with work disabilities have incomes below the poverty level.

Several ways to assess the financial comparability of individuals have been devised, and all of them show a definitive negative correlation between the presence of a work disability and income. The percent of people earning less than $5,000 per year is almost double for individuals with work disabilities and at least 10 percentage points lower if compared with people earning $8,000 or more. As a consequence of lower earnings, there is a greater proportion of handicapped individuals (6 percentage points) under the poverty level than people without work disabilifies. In fact, about 68 percent of handicapped applicants placed by the Job Service in Arizona during the second half of 1984 were placed at a wage below $5.00 per hour.

Nearly 8,100 handicapped individuals sought employment through the Job Service during the second half of 1984.

The Job Service offices are not the only source of job-ready individuals with work disabilities. There are many public and private organizations providing trained and employable handicapped individuals to the labor market.

The Vocational Rehabilitation Program served over 12,000 individuals with disabilities during last federal fiscal year. Of these, 13 percent were satisfactorily employed for over 60 days. The Job Service placement rate for job seekers with disabilities was just about 13 percent, suggesting that a surplus of employable handicapped individuals exists in relation to the jobs available for them.

In Arizona, job seekers with disabilities have job interests that range from managerial and professional to benchwork occupations. Their skills and experience are as diverse as the nature of their disabilities.

Almost 40 percent of individuals with work disabilities in Arizona have less than a high school level education.

There is a negative correlation between work disabilities and education. The negative correlation may be present because some developmentally disabled individuals were included in the count of individuals with work disabilities while their vocational abilities did not satisfy the specified academic level. Whatever the reason, the fact is that a high educational level enhances the opportunities for employment, usually by broadening the choices of attainable jobs.

Over 42,000 individuals with work disabilities have educational levels beyond high school in Arizona and many of them are satisfactorily working professionally in the field of their choice. However, too many others are either underemployed or simply unemployed. (Nearly 14 percent of the handicapped Job Service applicants have better than a high school education.) Many highly-educated handicapped individuals find themselves without a place in the labor market, frequently as a consequence of poor career counseling. This stems from attempts to accommodate a career to an individual's disability while disregarding his potential and, more importantly, labor market demands. Getting trained for unavailable jobs defeats the purpose behind any educational program: to enable participants to earn their own living. Persons involved with career counseling should, ideally, be one step ahead of labor market demand, keeping a close relationship with the business community and a watchful eye for the economic turns affecting employment.

October 6-12 was National Employ the Handicapped Week.

Every year one week during early October is officially dedicated to promote and increase awareness about the handicapped employment problem. Why? Because unemployment and underemployment among the nation's individuals with work disabilities remains serious despite technological and medical advancements, rehabilitation, right-to-work legislation, modification of environmental barriers, placement programs, and gradual attitude changes. Attitudes are a product of society by which a person expresses his social opinion, influenced solely by personal experiences and the common beliefs of the society he lives in. Since erratic attitudes seem to be at the heart of the employment problem of people with disabilities, any proposed solution would have to include public persuasion of employers, handicapped individuals, and any other involved persons. Unfortunately, the solution is not as simple as it sounds since no one can really "know" what another experiences unless he or she is placed in the same situation and experiences the same thing.

The most significant public persuasion campaign ever introduced was the federal government's Rehabilitation Act of 1973.

The main objective of this far-reaching mandate was to encourage employers to hire qualified handicapped people while, at the same time, encouraging handicapped people to become a part of the labor force.

Section 503 of the Rehabilitation Act requires every employer under contract or subcontract with the federal government for more than $2500 to have an affirmative action plan for recruiting, hiring, and promoting individuals with handicaps. In other words, employers must actively seek handicapped individuals and, in connection with affirmative action, they must make reasonable accommodations to the physical or mental limitations of their handicapped employees or applicants. The employers covered under Section 503 are mostly private, profit-making companies who have an agreement with any agency of the federal government for the furnishing of supplies or services.

Section 504 of the Rehabilitation Act contains similar provisions for handicapped individuals with a few coverage adjustments. The employers covered under Section 504 of the Act are those who receive financial assistance either directly or indirectly from the federal government. Employers covered under this Section of the Act must insure a "nondiscretionary action" plan instead of the more demanding affirmative action plan.

Outlined below are some of the steps an employer should take in order to carry out a successful affirmative action program:

- SALARY: No reductions in pay should be made to any handicapped employee because he or she may be getting compensations from another source.

- OUTREACH: When a need for an active affirmative action plan is determined, an employer should:

  1. Build up acceptance of handicapped employees by communicating with managers, supervisors, and other employees.

  2. Take the necessary measures to assure that affirmative action is followed.

  3. Use all recruiting sources such as state employment services, Vocational Rehabilitation, sheltered workshops, college placement offices, state education agencies, labor organizations, and any other organizations serving handicapped people.

  4. Review employment records of handicapped employees to find out whether their full abilities are being used.

  5. Review applicant records to find out whether they are being hired for jobs they qualify for--not just for certain stereotyped positions.

- ACCOMMODATIONS: Employers must make "reasonable accommodation" to the limitations of handicapped employees or job applicants...unless the employer can show the accommodations would impose an undue hardship on his business. Accommodations might include:

  1. Providing access to the job, including parking, removal of any architecural barriers limiting free access to the job, and provision for easy movement and use of services within the building where the worksite is located.

  2. Job restructuring, including redefinition of duties, revision of job descriptions, or part-time work.

  3. Modification of equipment in the worksite including tools, furniture, or physical arrangements to the worksites.

4. Full access to the employment office or an alternate system for handicapped people to apply for jobs.

5. Any accommodations must be geared to the needs of individual applicants or employees.

An employer could obtain benefits by hiring persons with work disabilities.

In addition to meeting the legal requirements of the Act, the most significant gain to employers is perhaps the availability of a pool of job-ready applicants trained to meet their specifically-defined needs. Handicapped individuals hired through dependable rehabilitation agencies are usually doublescreened, highly motivated to work, and selectively placed for the appropriate job. In addition, there is an extra effort made by rehabilitating agencies to facilitate any adjustments to the work environment needed by the new hires.

Advocates for employment of the handicapped affirm that the hiring of handicapped workers is a sound business practice since a properly placed handicapped individual is an asset to his or her employer. Studies such as the Du Pont survey were conducted during the 70s to assess the performance of employed people with work disabilities. They revealed that such individuals were, for the most part, productive, dependable, and safe.

At a public hearing held October 12, 1982 by the Arizona Civil Rights Advisory Board, representatives of major insurance companies, the State Compensation Fund, the Industrial Commission, and rehabilitation specialists testified that they recalled no instance in which an injury to a handicapped employee in Arizona had caused an employer to suffer an increase in insurance rates. The Board concluded that hiring the handicapped individual is not likely to subject an employer to higher workmen's compensation premiums. Futhermore, it is very likely that any economic costs incurred by an employer because he or she has hired an individual with disabilities (including rehabilitation, modification, and even increased insurance premiums rates) is deductible from his or her income tax liability.

An updated version of the Du Pont survey was conducted during 1981, reiterating the findings from the last decade's survey. The following are the scores from the 1981 survey in terms of percent average and above average.

	Handicapped	Nonimpaired
Safety	96%	92%
Performance of Job Duties	92%	91%
Attendance	85%	91%

The study concludes that handicapped individuals, regardless of their impairment, are well able to meet the challenges of their jobs.

Another potential benefit open to employers who hire handicapped individuals is offered by the federal government in the form of a tax credit. By hiring a member of a targeted group, an employer can choose to take the Targeted Jobs Tax Credit.

This program represents another government effort to persuade employers to hire persons from groups with special employment needs. Among those qualifying groups are individuals with work disabilities who are vocational rehabilitation referrals.

The amount of credit allowed for a tax year may be as high as 50 percent of first-year wages plus 25 percent of second-year wages.

The Arizona Rehabilitation Services Administration estimates a benefit-to-cost ratio of 1.095 or 9.5 percent annual return on investment.

A total of 1,649 rehabilitants succeeded during the 1984 federal fiscal year, in improving their total annual earnings from $1.8 million at referral to $15.4 million when rehabilitated.

It is estimated that the following benefits to the government will be derived because of these earning improvements:

- a total of $12.9 million in state income and sales tax paid;

- a total of $30.1 million in federal income tax paid;
- a total of $21.37 million improvement in the Social Security Fund's cash flow; and,
- a $2.34 million reduction in public assistance payments.

With a 9.5 percent annual return on investment, not counting society's benefits, our state is very much compelled to continue its rehabilitation efforts for individuals with work disabilities.

SUMMARY: Handicapped individuals are a large segment of society. Therefore, any employment problem suffered by the group greatly impacts the individuals involved as well as society as a whole. There are dozens of private and public organizations dedicated to the improvement of employment opportunities for the handicapped, all of them complemented by government policies.

Government policies, in the form of tax incentives or requirements, encourage employers to hire individuals with disabilities.

Comparitive studies of handicapped workers with non-impaired workers suggest that work disabilities do not have a negative effect on productivity, safety, or the dependability of an individual with disabilities while employed.

Finally, by enhancing and creating more job opportunities for handicapped individuals, all parties involved benefit directly or indirectly in the process.

Clara Dunn

NEWSLETTER WINS ICESA 1985 LMI PUBLICATION AWARD!!

#1

This Newsletter is the best monthly labor market information (LMI) publication in the nation in 1985. So says the Interstate Conference of Employment Security Agencies (ICESA). A plaque testifying to this was presented to Dan Anderson, head of the Research Administration which houses the units responsible for the Newsletter's production.

There are three Research Administration sections and some support services to be thanked. We will begin where the Newsletter begins, with the statistics gathered each month by the Current Employment Statistics/ Local Area Unemployment Statistics Unit headed by Vic Conti. Without these labor force statistics, the Newsletter would have little purpose or continuity from month to month.

Next comes the Economic Analysis Section, headed by Ron Simon. This group of people analyzes the numbers and creates feature articles each month to give the Newsletter the needed rigor and newsworthiness required for such an award. Sometimes the articles involve the use of econometric models created by the section's economists and sometimes they involve the reporting and analysis of basic research. In every case, this group of people sifts through the data and creates the narrative to give the Newsletter coherence and readability. The editor of the Newsletter, a position which has changed hands twice during the award period, is also in this section.

Third, is the Clerical Support Unit headed by Judi Vieira, who is assisted by two other word processors, Linda Van Calcar and Joette Pitts. These three people work together and with the editor to produce the sharp, professional look of this award-winning Newsletter.

Last, but never least, is the Operations Support Section of DES's Division of Business & Finance. Without the continuing support of the Print Shop, Forms Management and Procedures, and the Mail Distribution Center, the Newsletter could not reach its users with timely statistics. All good products repeatedly produced are products of teamwork. Operations Support is a vital part of the Newsletter production team.

Congratulations and deepest appreciation for all the hard work. We will not only strive to keep up the standard, but will work towards an ever-improving LMI Newsletter.

ARIZONA UNEMPLOYMENT INSURANCE ACTIVITIES-AUGUST 1985

	August 1985	July 1985	August 1984	% Change From One Year Ago
Arizona Claimants Served*	33,526	31,633	29,649	+13.1%
Arizona Average Weeks Unemployed**	9.7	8.5	9.2	+ 5.4%
Arizona Benefits Paid*	$ 10,532,629	$ 9,787,353	$ 10,065,085	+ 4.6%
Arizona Trust Fund Balance	$321,324,292	$303,731,428	$231,074,129	+39.1%

*All Programs　　**UI Only

THE ARIZONA LABOR FORCE IN SEPTEMBER

The drop in Arizona's unemployment rate which occurred in August was short lived. After its first decline in nine months, the unemployment rate in September regained its upward trend, rising two tenths of a percentage point to 6.6 percent. Only Coconino, Santa Cruz, and Yuma counties recorded a drop in their unemployment rates. The unusually strong seasonal employment gains recorded in August did not continue in September. Because manufacturing, mining, and construction are expected to continue slipping in the months ahead, the unemployment rate should continue to rise.

Nationally, the economy appeared to be teetering at the edge of a recession six months ago. Declining production, huge federal deficits, and a rising trade deficit made it appear that a recession would be here in late 1985 or early 1986. Although those dark clouds of recession have lightened considerably in the last few months, 1986 still looks like a difficult year. With the national economy being alternately stagnant or growing slowly, Arizona's high flying economy will drop to a lower plateau throughout most of next year.

Following that trend, manufacturing lost 200 more jobs in September. While the defense-dominated aerospace sector added 500 jobs and seasonal hirings by apparel manufacturers and food processors contributed 200 and 100 more jobs respectively, our important electronics manufacturers cut their labor forces by 900. This is consistent with the trend observed in the last few months. Until defense contractors attain their required staffing levels, they will help to cushion the continuing losses in electronics. Then, manufacturing losses can be expected to accelerate.

Construction, which reached its employment peak in June, saw employment fall by 600 jobs to 109,900. The decline in construction employment began later than we had originally expected and has been slower than previously forecast. Considering the large number of commercial, retail, and multi-family structures under construction, it seemed inevitable that large layoffs would occur when they were completed. But continued building in these areas, coupled with a strong single-family market, have helped to push many layoffs into next year.

In the rest of Arizona's economy during September, employment changes were dominated by the end of summer and the accompanying return of students for another school year and preparations for the winter tourism season. While it is yet too early to know precisely, it appears that retailers are preparing for a strong holiday and winter tourist season. Employment increases in both the trade and services industries were broad based and together contributed another 6,100 jobs to the local economy.

Employment changes in September were generally as expected. Strong seasonal gains in trade, services, and government were offset by losses in manufacturing and construction. If it were not for the defense-related activity in aerospace and electronics companies, Arizona's economy would be sliding downward much more rapidly. But due to our very strong growth last year and early this year, some sectors are continuing to grow to bring themselves even with the rest of the economy. We are now moving sideways or declining slowly. The outlook well into next year is for more of the same.

Dan Anderson

Arizona Labor Force and Employment

September 1985 (in thousands)

	ARIZONA				
				-- Amt Change --	
	Sep.* 1985	Aug. 1985	Sep. 1984	Aug. to Sep.	1984 to 1985
TOTAL CIVILIAN LABOR FORCE**	1452.8	1425.8	1435.0	+27.0	+17.8
Total Unemployment	93.4	94.7	62.5	-1.3	+30.9
Rate	6.4	6.6	4.4	---	---
Rate (Sea. Adj.)***	6.6	6.4	4.5	---	---
Total Employment	1359.4	1331.1	1372.5	+28.3	-13.1

THE ABOVE LABOR FORCE STATISTICS SHOULD NO

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	Sep.* 1985	Aug. 1985	Sep. 1984	Aug. to Sep.	1984 to 1985
TOTAL WAGE AND SALARY	1262.9	1238.0	1195.2	+24.9	+67.7
Manufacturing	183.3	183.5	177.3	-0.2	+6.0
Durable Goods	144.7	145.3	139.7	-0.6	+5.0
Stone, Clay and Glass	8.5	8.5	7.5	+0.0	+1.0
Primary and Fabricated Metals	16.6	16.9	17.2	-0.3	-0.6
Primary Metals	7.1	7.2	7.3	-0.1	-0.2
Fabricated Metals	9.5	9.7	9.9	-0.2	-0.4
Machinery	69.0	69.9	69.8	-0.9	-0.8
Other Durable Goods	50.6	50.0	45.2	+0.6	+5.4
Aircraft and Missiles	23.5	23.0	20.6	+0.5	+2.9
Lumber and Wood Products (Except Furniture)	7.9	7.8	7.2	+0.1	+0.7
All Other Durable Goods	19.2	19.2	17.4	+0.0	+1.8
Nondurable Goods	38.6	38.2	37.6	+0.4	+1.0
Food and Kindred Products	8.7	8.6	8.3	+0.1	+0.4
Apparel	5.0	4.8	5.0	+0.2	+0.0
Printing and Publishing	14.2	14.3	13.8	-0.1	+0.4
All Other Nondurable Goods	10.7	10.5	10.5	+0.2	+0.2
Mining and Quarrying	11.2	11.2	12.9	+0.0	-1.7
Copper Mining	8.5	8.6	10.0	-0.1	-1.5
Other Mining and Quarrying	2.7	2.6	2.9	+0.1	-0.2
Construction	109.9	110.5	99.5	-0.6	+10.4
Trans., Communications, and Public Utilities	63.2	63.2	60.8	+0.0	+2.4
Transportation	28.7	28.5	28.2	+0.2	+0.5
Communications and Public Utilities	34.5	34.7	32.6	-0.2	+1.9
Trade	302.9	298.6	288.2	+4.3	+14.7
Wholesale Trade	62.7	62.0	59.3	+0.7	+3.4
Retail Trade	240.2	236.6	228.9	+3.6	+11.3
General Merchandise and Apparel	38.5	37.7	38.0	+0.8	+0.5
Food Stores	36.9	36.0	34.8	+0.9	+2.1
Automotive and Service Stations	29.5	29.7	27.9	-0.2	+1.6
Eating and Drinking Places	84.6	83.0	79.8	+1.6	+4.8
Other Retail Trade	50.7	50.2	48.4	+0.5	+2.3
Finance, Insurance, and Real Estate	78.0	77.8	72.5	+0.2	+5.5
Services and Miscellaneous	296.8	295.0	276.3	+1.8	+20.5
Hotels and Other Lodging Places	30.2	29.7	27.7	+0.5	+2.5
Business Services	69.2	68.0	63.5	+1.2	+5.7
Health Services	71.7	71.2	68.7	+0.5	+3.0
Other Services	125.7	126.1	116.4	-0.4	+9.3
Government	217.6	198.2	207.7	+19.4	+9.9
Federal	41.1	41.0	39.7	+0.1	+1.4
State and Local	176.5	157.2	168.0	+19.3	+8.5
School	102.3	81.9	99.7	+20.4	+2.6

* Preliminary

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

NOTE--Prepared in cooperation with the U.S. Department of Labor,Bureau of Labor Statistics.

September 1985 (in thousands)

MARICOPA COUNTY					PIMA COUNTY				
			-- Amt Change --					-- Amt Change --	
Sep.* 1985	Aug. 1985	Sep. 1984	Aug. to Sep.	1984 to 1985	Sep.* 1985	Aug. 1985	Sep. 1984	Aug. to Sep.	1984 to 1985
919.4	903.3	909.3	+16.1	+10.1	264.2	257.2	259.7	+7.0	+4.5
46.7	46.0	30.3	+0.7	+16.4	13.8	13.3	10.4	+0.5	+3.4
5.1	5.1	3.3	---	---	5.2	5.2	4.0	---	---
5.2	5.0	3.5	---	---	5.4	5.1	4.1	---	---
872.7	857.3	879.0	+15.4	-6.3	250.4	243.9	249.3	+6.5	+1.1

BE USED FOR ECONOMIC ASSISTANCE PROGRAMS

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

825.5	811.8	779.7	+13.7	+45.8	230.3	223.9	214.9	+6.4	+15.4
131.3	131.9	128.4	-0.6	+2.9	32.1	32.0	29.9	+0.1	+2.2
104.8	105.5	102.6	-0.7	+2.2	27.0	26.8	24.8	+0.2	+2.2
5.2	5.1	4.5	+0.1	+0.7					
10.8	11.1	10.9	-0.3	-0.1					
55.1	55.9	56.3	-0.8	-1.2					
33.7	33.4	30.9	+0.3	+2.8					
26.5	26.4	25.8	+0.1	+0.7	5.1	5.2	5.1	-0.1	+0.0
5.4	5.4	5.2	+0.0	+0.2					
3.2	3.1	3.0	+0.1	+0.2					
10.4	10.5	10.2	-0.1	+0.2					
7.5	7.4	7.4	+0.1	+0.1					
0.6	0.6	0.6	+0.0	+0.0	2.4	2.4	3.1	+0.0	-0.7
75.7	76.1	68.0	-0.4	+7.7	21.5	21.8	18.7	-0.3	+2.8
41.8	41.9	39.4	-0.1	+2.4	8.9	8.9	9.1	+0.0	-0.2
19.6	19.5	18.8	+0.1	+0.8	4.1	4.0	4.3	+0.1	-0.2
22.2	22.4	20.6	-0.2	+1.6	4.8	4.9	4.8	-0.1	+0.0
205.3	202.0	195.8	+3.3	+9.5	49.9	49.5	47.3	+0.4	+2.6
49.5	49.3	47.4	+0.2	+2.1	7.6	7.5	6.7	+0.1	+0.9
155.8	152.7	148.4	+3.1	+7.4	42.3	42.0	40.6	+0.3	+1.7
24.1	23.5	23.8	+0.6	+0.3	7.3	7.2	7.5	+0.1	-0.2
23.4	22.6	22.2	+0.8	+1.2	5.9	5.8	5.5	+0.1	+0.4
18.9	19.0	17.7	-0.1	+1.2	4.6	4.7	4.4	-0.1	+0.2
54.2	53.0	50.9	+1.2	+3.3	15.8	15.5	14.9	+0.3	+0.9
35.2	34.6	33.8	+0.6	+1.4	8.7	8.8	8.3	-0.1	+0.4
61.1	61.0	56.6	+0.1	+4.5	10.8	10.8	10.2	+0.0	+0.6
200.6	197.5	187.2	+3.1	+13.4	56.2	56.1	50.7	+0.1	+5.5
17.5	17.0	15.8	+0.5	+1.7	4.6	4.4	4.1	+0.2	+0.5
56.3	55.2	52.4	+1.1	+3.9	10.2	10.1	8.6	+0.1	+1.6
47.4	47.1	46.8	+0.3	+0.6	15.5	15.3	13.8	+0.2	+1.7
79.4	78.2	72.2	+1.2	+7.2	25.9	26.3	24.2	-0.4	+1.7
109.1	100.8	103.7	+8.3	+5.4	48.5	42.4	45.9	+6.1	+2.6

-- Prepared by Labor Market Information, Research and Analysis (CPS, 1/85)

NONMETROPOLITAN COUNTIES
LABOR FORCE AND EMPLOYMENT
September 1985

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL CIVILIAN LABOR FORCE*.	15,252	29,050	36,825	12,600	7,625	2,175	4,775
Total Unemployment	2,125	2,350	2,925	1,425	825	350	875
Rate	14.0%	8.1%	7.9%	11.3%	10.8%	16.1%	18.3%
Rate (Seas. Adj.)**.	14.6%	8.6%	9.2%	11.5%	11.2%	16.4%	-INA-
Total Employment	13,000	26,700	33,900	11,175	6,800	1,825	3,900

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL WAGE AND SALARY. . . .	14,900	23,675	34,775	9,850	4,775	1,900	2,525
Manufacturing.	725	2,350	2,600	1,275	175	50	75
Mining and Quarrying	25	150	25	1,600	25	700	0
Construction	1,000	1,425	1,600	425	150	75	75
Trans., Comm., & Pub. Util..	1,875	1,500	2,350	325	175	50	50
Trade.	1,425	5,050	8,075	1,925	1,325	300	825
Fin., Insur., & Real Estate.	275	625	750	225	150	50	75
Services and Miscellaneous .	4,225	3,025	8,400	1,750	800	100	650
Government	5,350	9,550	10,975	2,325	1,975	575	775

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL CIVILIAN LABOR FORCE*.	24,125	25,525	31,200	9,025	33,400	37,725
Total Unemployment	2,475	3,050	4,075	1,875	2,025	8,475
Rate	10.3%	11.9%	13.1%	20.8%	6.1%	22.5%
Rate (Seas. Adj.)**.	10.9%	13.2%	12.9%	19.2%	6.5%	-INA-
Total Employment	21,650	22,475	27,125	7,150	31,375	29,250

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL WAGE AND SALARY. . . .	18,100	19,200	25,325	7,825	20,575	23,475
Manufacturing.	2,525	1,850	3,175	1,000	2,375	1,625
Mining and Quarrying	300	1,125	3,550	0	600	50
Construction	1,475	1,025	1,125	325	2,000	1,950
Trans., Comm., & Pub. Util..	1,125	1,600	1,150	550	875	900
Trade.	5,125	3,450	4,475	2,975	5,250	7,500
Fin., Insur., & Real Estate.	875	350	675	250	800	875
Services and Miscellaneous .	3,525	5,075	2,900	1,225	4,125	4,250
Government	3,150	4,725	8,275	1,500	4,550	6,325

*Adjusted to the Current Population Survey (CPS) to reflect place of residence.
**Seasonal adjustment not applicable for economic assistance programs.

NOTE--Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

ARIZONA LABOR FORCE AND EMPLOYMENT FOR ECONOMIC ASSISTANCE PROGRAMS

September 1985

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,452,750	1,359,360	93,390	6.4%
Apache	15,127	13,001	2,126	14.1
Cochise	29,046	26,696	2,350	8.1
Coconino	36,823	33,900	2,923	7.9
Gila	12,593	11,167	1,426	11.3
Graham	7,636	6,802	834	10.9
Greenlee	2,163	1,817	346	16.0
La Paz	4,718	3,908	873	18.3
Maricopa	919,447	872,726	46,721	5.1
Mohave	24,117	21,639	2,478	10.3
Navajo	25,525	22,475	3,050	11.9
Pima	264,161	250,357	13,804	5.2
Pinal	31,204	27,125	4,079	13.1
Santa Cruz	9,014	7,149	1,865	20.7
Yavapai	33,391	31,364	2,027	6.1
Yuma	37,722	29,234	8,488	22.5

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators. Note: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

ESTIMATED HOURS AND EARNINGS OF PRODUCTION WORKERS IN SELECTED INDUSTRIES IN ARIZONA

September 1985

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVG. HOURLY EARNINGS		
	SEP.* 1985	AUG. 1985	SEP. 1984	SEP.* 1985	AUG. 1985	SEP. 1984	SEP.* 1985	AUG. 1985	SEP. 1984
FOR THE STATE OF ARIZONA*									
Manufacturing	390.26	385.52	368.10	40.4	40.2	40.9	9.66	9.59	9.00
Aircraft & Missiles	INA	INA	INA	INA	INA	INA	INA	INA	INA
Food & Kindred Products	350.84	334.05	319.48	39.2	39.3	39.2	8.95	8.50	8.15
Primary Metals	479.88	486.25	478.14	38.7	38.9	39.0	12.40	12.50	12.26
Machinery	353.03	346.43	327.18	39.8	39.1	41.0	8.87	8.86	7.98
Copper Mining	577.40	558.14	593.42	42.3	41.1	42.6	13.65	13.58	13.93
Construction	456.07	436.30	429.30	37.2	37.1	36.6	12.26	11.76	11.72
Utilities	561.12	561.12	560.77	42.0	42.0	44.4	13.36	13.36	12.63
Retail Trade**	243.21	245.78	234.94	33.5	33.9	34.5	7.26	7.25	6.81
Wholesale Trade	371.64	350.80	358.21	38.0	37.2	38.6	9.78	9.43	9.28

* Preliminary

** Excludes eating and drinking places.

NOTE--These estimates are based on a sample of full and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

--Prepared by Labor Market Information, Research and Analysis (1972 SIC, 1/84)

TURNOVER JOB OPPORTUNITIES
A SINGLE MAJOR IMPLICATION OF THE EMPLOYMENT SERVICE POTENTIAL (ESP) PROJECT

The U.S. Department of Labor, in conjunction with the state employment security agencies, collects labor turnover information from every employer covered by the state unemployment insurance laws. Turnover data can be derived through computer manipulation of the Unemployment Insurance Base Period Wages (UIBPW) and the Employer Name and Address (ENA) file. The derivation of turnover data from records submitted by employers in compliance with legal requirements makes it one of the most reliable labor market data series available. In Arizona, more than 95 percent of employment is covered by the unemployment insurance statutes. To produce counts on hiring activity, the UIBPW is matched against the ENA file. By using the above-mentioned technique, the article, "Labor Turnover: An Update," in the May issue of the Newsletter, provided quarterly data on turnover by county and for the state. The article also provided turnover data by industry for the 2nd quarter 1984. A complete report on turnover, which relates the turnover data to different economic conditions and their implications, is forthcoming.

The initial goal of the Employment Service Potential (ESP) project was to measure the total hiring activity taking place in a given market that could potentially be facilitated through the U.S. employment service offices. However, the potential use of turnover data by vocational and educational planners and for estimating occupational employment opportunities has surpassed the initial goal of the ESP project. In other words, the facts about hiring patterns in Arizona revealed by the turnover data have significance for a wider variety of areas.

This issue looks into one major significance, among many, that lies in the use of turnover data to estimate future occupational employment opportunities as opposed to current estimation by the Occupational Employment Statistics (OES) program. Under the current OES program, total job openings represent the number of openings due to growth of the industry and separations from the labor force. They do not account for labor turnover, i.e., openings created when a worker changes jobs, leaving the job to be filled by someone else. These vacancies are often the largest source of job openings. Job opportunities, however, vary among major industrial divisions largely depending on turnover rates. It is also important to note that within the industry, job opportunities are unique to a particular occupation. Unfortunately, the technique to estimate specific occupational turnover is yet to be developed. In this study, industry turnover rates are applied equally to all occupations within the industry. Secondly, the average new hire rates for a particular industry in 1984 are assumed to be realized in 1985-86.

Estimated job opportunities based on turnover data for Finance, Insurance, and Real Estate (FIRE) are projected for 1985-86 and then compared with the job opportunities based on industry growth and separations from the labor force. Table 1 shows the 1984 average new hire factor for different industries within FIRE. These rates are used to estimate 1985-86 total job opportunities in different occupations within the industry. Finally, job opportunities estimated for like occupations in different industries are then summed to find 1985-86 total job opportunities by occupation. The total job opportunities in 1985-86 resulting from turnover data are estimated to be more than 40,000, whereas job opportunities based on growth and labor force separations for the same year are below 5,000. Therefore, the occupational opportunities resulting from turnover in FIRE are more than eight times the traditionally reported opportunities from growth and labor force separations. Table 2 compares the estimates of 30 occupations with the largest employment opportunities from labor turnover and the estimated employment opportunities from growth and labor force separations.

FIRE is considered to be relatively stable and experiences only moderate turnover. Since numerous job opportunities exist even in this low turnover industry, an industry with high turnover such as construction, retail trade, or services will have an enormous number of job opportunities by comparison.

By identifying job opportunities in each industry, turnover data can be used for future planning and training by vocational, educational, and other job training institutions throughout Arizona.

Jalal Ahmad

TABLE 1

ANNUAL NEW HIRE FACTOR IN FIRE, STATEWIDE, 1984

Sic	Major Groups	New Hire Factor
60	Banking	.344
61	Credit agencies other than banks	.682
62	Security and commodity brokers, dealers, exchanges, and services	.595
63	Insurance	.426
64	Insurance agents, brokers, and service	.765
65	Real estate	1.389
66	Combinations of real estate, insurance loans, and law offices	.659
67	Holding and other investment offices	.966

SOURCE: Arizona Department of Economic Security, Research Administration.

TABLE 2

STATEWIDE ESTIMATES OF 30 OCCUPATIONS WITH LARGEST EMPLOYMENT OPPORTUNITIES FROM LABOR TURNOVER IN FIRE

	Estimated 1985 Employment	1985-86 Turnover Job Opportunities	1985-86 Growth & Separations Job Opportunities
Managers & Officers	9,059	4,034	605
Secretaries	4,625	2,832	377
Sales Representatives, Agents & Associates, Financial Services	2,006	2,046	116
General Clerks	4,148	2,393	332
Maintenance Repairers, General Utility	1,638	2,191	48
Tellers	6,082	2,003	539
Gardeners & Groundskeepers	1,114	1,484	61
Sales Representatives, Agents & Associates, Insurance	2,360	1,282	128
Clerical Supervisors	2,074	934	131
Guards & Doorkeepers	681	858	15
Accounting Clerks	1,510	805	116

TABLE 2 (CONTINUED)

	Estimated 1985 Employment	1985-86 Turnover Job Opportunities	1985-86 Growth & Separations Job Opportunities
Bookkeepers, Hand	955	767	62
Food Service Workers	534	670	27
Maids	478	627	31
Accountants & Auditors	767	553	44
Typists	1,246	561	117
Underwriters (excluding Life Insurance Sales Agents)	921	505	60
New Accounts, Tellers	1,149	416	118
Credit Clerks	831	414	74
Collectors	886	386	64
Loan Closers	825	381	71
Receptionists	446	370	33
Claim Adjusters	736	357	40
Sales Representatives, Agents and Associates	662	354	45
File Clerks	803	339	76
Real Estate Brokers	253	333	14
Keypunch Operators	765	329	72
Switchboard Operators & Receptionists	416	308	32
Claims Clerks	626	300	50
Credit Analysts	707	278	63

SOURCE: Arizona Department of Economic Security, Research Administration.

NEW DEVELOPMENTS

"New Developments" is featured each month as a service to employers and job seekers. It is a compilation of public announcements of the more significant new construction, grand openings, major hirings and layoffs, and other employer events that have special significance for Arizona labor markets. The announcements are paraphrased and otherwise edited from articles published in newspapers and other periodicals from throughout the state. "New Developments" are limited to space available, and no attempt is made to compile an exhaustive list of all such events that have occurred during the month.

CONSTRUCTION: Western Savings broke ground on its new corporate headquarters at the southeast corner of 24th Street and Arizona Biltmore Circle Drive, adjacent to the Mansion Club, also owned by the savings and loan. The complex will include three buildings totalling 125,000 square feet on approximately 11 acres. The two-story, 80,000 square-foot headquarters building will feature one of Arizona's largest copper roofs.

Cardon Homes has started infrastructure improvements on a 400-acre residential community called "Amberlea" in west Phoenix. Located between 83rd and 91st avenues, just north of I-10, the first phase will consist of 136 homes built in a pinwheel cluster. Build-out is estimated at five years and, when completed, the community will have approximately 7,000 residents.

Steer West Profit Sharing Plan will develop a $60 million, 16-story office building at the southwest corner of Central Avenue and Camelback Road which will include 417,000 square feet of office space and five levels of underground parking. The building's north and east faces will feature windows of reflective blue glass accented by stainless steel "pinstriping." The project is scheduled to be completed by the end of 1987.

Del E. Webb Construction Services Co. has begun work on the $39 million, 362-room Phoenix Crescent Hotel, a commercial traveler hotel at Interstate 17 and Dunlap Avenue. The 281,000 square-foot, post-tension concrete facility will employ about 275 people, according to Nickolaus Klotz, Crescent Hotel's president. The Phoenix Crescent will anchor a business park which will be developed in incremental phases during the next five years. It will offer more than 700,000 square feet of office space. The hotel itself will be eight stories high, and will feature a restaurant, conference facilities, and 20,000 square feet of meeting space. It is scheduled to open in November 1986.

Construction is under way on the Chandler Compadre Stadium at Bogle Park, the future site of the Milwaukee Brewers' spring training camp. Located within the 2,700-acre Ocotillo master-planned community at Alma School and Ocotillo roads, the stadium is expected to be complete by spring 1986. When not in use for Cactus League baseball games, the 20-acre park complex will be utilized for community events and as a recreational park.

Tucson has been selected by Del E. Webb Corp. as the site of its next active adult community outside the Phoenix area. They have signed a letter of intent to purchase the 1,000-acre North Village portion of Rancho Vistoso northwest of Tucson, a 7,000-acre proposed planned community. "While Tucson has many similarities to Phoenix, its distinct differences appeal to an alternate market," said Fred Kuentz, Del E. Webb Development Co. chairman. "Both enjoy moderate cost-of-living indices, but Tucson has a more moderate climate, which is important to migrating adults." Kuentz said 300 of the 1,000 acres will be maintained as natural open space. Of the remaining 700, 130 acres will be used for a golf course, leaving 570 acres for residential and commercial development. Potential population is estimated at 5,000.

MORE LAYOFFS, PAY CUTS - Motorola's Semiconductor Products Sector is once again laying off employees due to the depth and duration of the semiconductor-market downturn. Between 400 and 500 employees are expected to accept early-retirement offers, and 300 to 400 will be laid off, furloughed, or transferred. The company is asking some European employees to quit, and all remaining U.S. employees will see graduated salary cuts effective from October 1, 1985 to March 31, 1986.

Intel Corp. has reduced the salaries of nearly half its work force and will shut down production for six days in December in its U.S. operations, including semiconductor plants in Deer Valley and Chandler. The majority of Intel's 2,800 Arizona employees will take pay cuts ranging from 4 to 9.5 percent due to the industry slump. Intel, which laid off 200 workers in Arizona last year, hopes to avoid more layoffs by using salary cuts and freezing all merit-pay increases. It was pointed out that higher-paid employees face a larger cut, while workers at the low end of the pay scale will not be affected.

Eleven days after announcing upcoming layoffs for 400 to 500 workers at its plants in Tucson and Wichita, Kansas, Gates Learjet Corp. told 142 of its Tucson employees that they had only one more week to work. The remaining 900 or so employees in Tucson have been told that, in order to cut costs, wages have been frozen until the end of the year and officers and directors have taken voluntary reductions in pay.

NEW JOBS CREATED - Nineteen companies representing 10,090 new jobs decided to set up shop in Maricopa County during fiscal 1985 after obtaining information from Phoenix Metrogroup, a consortium of 11 Valley Chambers of Commerce. Metrogroup chairman Steve Jonland touted the tally in mid-September after the release of the group's first annual report. Nearly nine-tenths of the new jobs cited in the report will result from the siting of the new McDonnell Douglas Helicopters Co. (formerly Hughes Helicopters Co.) offices in Tempe and Mesa and the expansion of Sperry facilities in Glendale. According to Metrogroup's figures, 6,300 new jobs were created at McDonnell Douglas and 2,600 new jobs were created at Sperry.

Arizona Labor Market Newsletter
LABOR MARKET INFORMATION PUBLICATIONS
Site Code 733A
P.O. Box 6123
Phoenix, Arizona 85005

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ARIZONA LABOR MARKET INFORMATION

NEWSLETTER

Vol. IX No. 12
December 1985

Unemployment Rate

Seasonally Adjusted
October*

ARIZONA	6.5%
Maricopa Co.	5.1%
Pima Co.	5.4%
UNITED STATES	7.1%

Consumer Price Index

National-September
1967 - Base Year

Wage Earner/Clerical Worker -	320.5
% Chg. Yr. Ago	2.7
All Urban -	324.5
% Chg. Yr. Ago	3.2

Phoenix-3rd Qtr.
1977 - Base Year

All Urban -	191.4
% Chg. Yr. Ago	4.5

Producer Price Index

National-October*
1967 - Base Year

All Commodities	308.0
% Chg. Yr. Ago	-0.5
Finished Goods	294.8
% Chg. Yr. Ago	1.1

* Preliminary

Agribusiness--An Industry In Transition

At the turn of the century, agriculture in the United States was virtually a self-contained industry. Each farmer was responsible for producing his own feed, seed, draft animals, and even simple farm equipment. Raw materials produced on the farm were turned into food and clothing items for the family. The small amount of materials not used on the farm were sold in local markets. In the past few decades, the agriculture industry has undergone a radical change.

The economics of farm life has changed radically since the industrial revolution. Food and clothing items once produced nearly exclusively on the farm are now purchased almost exclusively off the farm. Agriculture is no longer limited to self-contained farm family enterprises. The economics of agriculture has grown into a diverse industry called agribusiness.

Agribusiness now covers businesses involved in food manufacturing, food distribution, and commodity processing, as well as those companies selling goods and services to the farmer. Agribusiness has become an important part of every country's economy. According to Dr. Michael Woolveton of Arizona State University, "Agribusiness in the United States contributes about 20 percent to the Gross National Product (GNP) and employs approximately 23 percent of the labor force."

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Arizona Labor Market Information Newsletter
WINNER OF THE ICESA 1985 LMI PUBLICATION AWARD

Nancy Augustin, editor
Processed by RA Clerical Support Unit

Agribusiness, as an industry, basically consists of the input supply industries; firms involved in the processing, manufacturing, and distribution of food products; and agricultural production firms. Examples of input industries would be Dekalb, Elanco, and Standard Oil, in that they manufacture and sell products to farmers and ranchers.

Firms such as McDonald's, Cargill, Sunkist Growers, and Anheuser-Busch are ones that process, manufacture, and distribute food products. Agricultural production firms, farms, and ranches, although larger and more specialized than in the past, continue to be owned and operated by individuals rather than corporations. However, the trend in agribusiness the last few years has been toward the larger, corporate-owned enterprise.

It was estimated that in 1980, input supply industries in the United States employed about 7.6 million people; commodity processing, food manufacturing, and food distribution employed more than 12.7 million people; and about 3.3 million people were employed in agricultural production.

Yet, as positive as they may appear, the 1980s has produced some of the worst economic conditions for farmers since the 1930s. In 1935, there were approximately 6.8 million farms in the United States selling $1,000 or more worth of farm products per year. In 1984, there were only 2.2 million farms of this kind. The trend away from farming is clear.

As with any industry, farming tends to be cyclical. The 1970s were a period of relative stability in the agribusiness industry. The 1980s saw a combination of high interest rates, excess production of many farm commodities, a weakening demand for many farm products, and bad weather drive many farmers off of their land.

Some of the factors such as excess production are difficult to understand. Simply put, farm production as a result of technological efficiency makes the farmer of today more productive than he was 10 years ago. However, production is exceeding demand for many farm products. As a result of this excess production, 30 million acres of farmland will have to be idled this year in the United States.

In addition to a decline in farm income due to overproduction, farm debts have been rising and the value of farm assets have been falling. The price of farmland peaked in 1981. From 1981 to April of 1985, farmland prices dropped 19 percent nationwide. The average value of farmland declined from $819 to $679 per acre. The Department of Agriculture estimates a decline in farmland values since 1981 as high as 50 percent in Nebraska. It has been estimated as high as 40 percent in the cornbelt states of Iowa, Minnesota, and Illinois. The value of farmland has fallen to levels that were common in the mid-1970s.

Those hardest hit by the worsening economic conditions in agriculture are middle-sized and commericial farms run by families who depend on the farm for almost all of their income. Farm size, for statistical purposes, is defined by the United States Department of Agriculture in terms of annual sales of farm products. For example, a family-sized commercial farm is one that has $50,000 to $500,000 in annual sales.

The economic woes in agriculture are less likely to affect the large corporate or small farm operator. Large farms, those selling $500,000 or more of farm products a year, are in a better position in that they often rent equipment and land and, because of their larger proportionate size, can often hold on to land that has to be idled for a long period of time. The amount of government subsidy is higher for a larger farm. Obviously, a large corporate farm will receive more government subsidy than a smaller, family-operated farm. In 1982, there were only 28,000 large farms in the U.S., slightly more than 1 percent of all farms, yet they received more than two-thirds of total net farm income.

To be sure, some small farms are facing a financial crisis. Yet, the smaller farm operation is less likely to feel an economic pinch because those operations are less likely to have large outstanding debts.

Also, most small farm income comes from non-farm sources. The typical small farm is one that has been kept in the family for generations and is most often not involved in active farm production, or is essentially free of debt and has annual sales below $40,000 per year. The small farmer is able to meet his living expenses, yet does not have the capacity to borrow to enable him to expand his operation. In essence, the small farmer finds himself in a Catch-22; he is making ends meet, yet he cannot borrow any capital to enable him to expand.

As a rule of thumb, if a farm has a debt-to-asset ratio of more than 70 percent, it is considered to be in severe trouble. If this ratio is between 40 and 70 percent, the farm is considered to be facing some serious financial trouble, and if the ratio is less than 40 percent, the operation can be considered safe.

According to the October issue of American Demographics, as of January 1985 there were 229,000 middle-sized farms in serious or severe financial trouble. This represents 34 percent of all middle-sized farms in the United States and is an increase of 29 percent from January 1984. The number of technically "broke" farms, those owing more than the value of their assets, has increased by more than 40 percent, to 43,000 farms between 1984 and 1985.

During the normal course of events, a farm family begins when the operator establishes the farm. This farm is then expanded over the course of the next 10 to 20 years. When the farmer reaches his late 40s and 50s and his family has grown and left home, he has more discretionary income and is able to pay off his debts.

The normal cycle of agriculture was disrupted in the 1970s as farm assets began to inflate. As the real estate values of farmland began to increase, farmers were encouraged to purchase/mortgage additional acres to farm. It made sense because farmland was expected to increase in value. Investment in farmland at the time was considered safe. As farmland increased in value, so did farm equipment. Farm operators were encouraged to purchase new equipment and depreciate it over a shorter period of time, enabling them to more rapidly recover the cost of the equipment. If, however, the farmer incurred losses after acquiring the equipment, the after-tax benefit was virtually eliminated. A management decision such as this put many farmers at economic risk. Farm operators during the 1970s, in order to expand their operations, borrowed heavily on the increased value of their land. As crop prices fell due to overproduction, the farm operator began to incur losses, and found that he did not have sufficient cash resources to meet his loan obligations.

For example, an operator who started farming in the 1960s or earlier had a smaller debt ratio than those who began farming in the 1970s. Statistically, most of the farmers who are facing financial trouble are under age 55, and the majority are younger than 45. According to recent studies, farmers are more production efficient today than they were 10 years ago, but they entered farming at an unfortunate time. Those management decisions that made the farmers of the 1950s wealthy will now force farmers into bankruptcy.

The agricultural picture in Arizona appears to be relatively stable. This obviously contrasts with the national scene. One reason for the relative stability of Arizona agriculture is that farms and ranches tend to be very large operations. Arizona ranks first in the average size of farms and ranches among the Western states. Across the United States, the average farm size is 437 acres. By comparison, in Arizona the average farm size is 4,518 acres.

In Arizona, land in farms and ranches has steadily declined since the late 1950s to 37,500,000 acres in 1984. The number of farms and ranches in 1984 stood at 8,300. Over half of the farms in Arizona account for less than one percent of our agricultural sales. About 25 percent of the farms contribute approximately 97 percent of total agricultural sales. Less than 2,000 farms in 1984 accounted for almost 97 percent of the total crops harvested. Of the farms and ranches with cattle, less than 20 percent accounted for 99 percent of total cattle sales revenue.

The agricultural market in Arizona has slowed during the past five years. In 1979, total cash receipts from agricultural markets were at $1,735,715,000; this dropped to $1,643,630,000 by 1983.

According to the Arizona Crop and Livestock Reporting Service, agricultural product sales brought in less money in 1984 than any year since 1978. While sales were down, farm marketing expenses remained relatively stable, paralleling costs incurred in 1983. Costs for feed, livestock, seed, fertilizer, repairs, and hired labor amounted to 1.5 billion in 1983, down slightly from 1.6 billion in 1982.

If one takes the total Arizona net income from agriculture in 1983 of $89.4 million and divides that by production expenses of $1.5 billion, the agriculture rate of return is 5.6 percent compared to a 23.9 percent rate of return in 1979.

While the rate of return in agriculture has declined, government payments to farm producers has increased 1,224 percent; that is from $9.1 million in 1979 to $111 million in 1983.

Total Arizona farm debt increased from $1.79 billion in 1983 to $1.82 billion in 1984. While livestock, poultry, and crops have decreased in value during the past five years, the appreciation of real estate has more than offset this decline, keeping the debt-to-asset ratio relatively stable over the past several years.

Within Arizona, Maricopa, Pinal, and Yuma counties have by far the highest cash receipts from agricultural marketings. In 1983, these three counties accounted for 79 percent of total cash crop receipts. Maricopa County had $358,167,000 in cash receipts from agricultural marketings, Pinal County had $158,113,000, and Yuma County had $220,035,000. The figures are down significantly, though, from 1981 when Maricopa County had $384,017,000 in total cash receipts, Pinal County had $186,606,000, and Yuma County had $325,766,000. In comparison to the national picture, agriculture in Arizona seems to have fared relatively well during the past few years. True, the profit ratio has gone down. However, by comparison, Arizona's farms and ranches have done much better financially than the farm operator of the Midwest.

As to what will happen in the near future, it is difficult to speculate. The consensus of opinion seems to be that the agribusiness industry will continue to expand in the areas of input supply and in processing, manufacturing, and distribution. Agricultural production, farms, and ranches will continue to decline in number. A trend toward larger and more specialized farms and ranches will result in even fewer farms in the future.

Those living in rural areas will face some dramatic changes in the next few years. It is likely that farm bankruptcies will increase, and that farm lending agencies such as agricultural banks and production credit associations will also face severe financial problems. The federal government has shown reluctance to increase agricultural assistance to the middle-sized farm operation. Government aid to the farmer is, therefore, not likely to increase enough to prevent a continued, rapid attrition of middle-sized, commercial family farms.

Jeffrey D. Bowman

SOURCES:

Arizona Agricultural Statistics, 1984. Arizona Crop and Livestock Reporting Service. Bulletin S-20, July 1985.

American Demographics. "Crisis on the Farm," Octobr 1985. Volume 7, No. 10.

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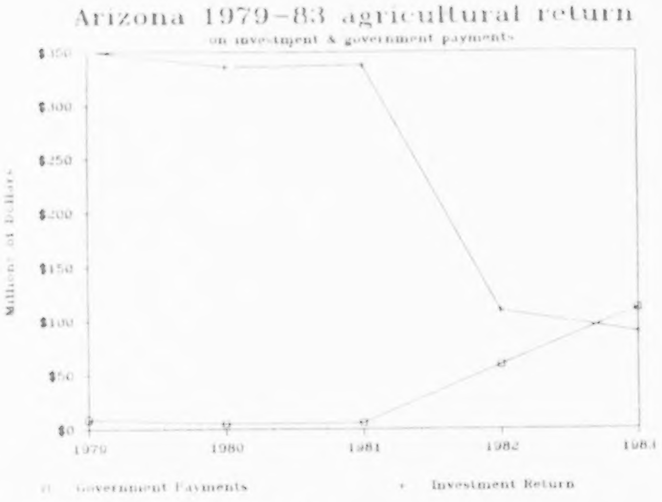
Arizona Farmer-Stockman. August 1985, Volume 64, No. 8.

CASH RECEIPTS FROM AGRICULTURAL MARKETING: CROPS
ARIZONA'S COUNTIES, 1979-1983

County	1979	1980	1981	1982	1983
Apache	$ 4,816	$ 3,728	$ 1,568	$ 1,744	$ 2,085
Cochise	36,951	38,209	48,155	37,601	36,437
Coconino	10,738	9,319	5,615	3,994	3,878
Gila	4,052	2,796	8,069	9,372	8,115
Graham	18,064	21,434	32,503	32,233	28,641
Greenlee	2,981	2,796	3,070	1,439	2,024
La Paz*					73,945
Maricopa	342,992	377,433	384,017	367,326	358,167
Mohave	7,587	10,251	7,045	8,507	9,369
Navajo	4,286	3,728	4,579	4,328	4,467
Pima	20,849	20,503	26,169	23,593	19,963
Pinal	147,380	174,271	186,606	173,421	158,113
Santa Cruz	1,922	1,864	1,370	977	1,136
Yavapai	7,697	6,524	1,929	1,585	1,718
Yuma*	272,509	259,077	325,766	329,600	220,035
ARIZONA	885,824	931,933	1,036,461	995,720	928,120

* La Paz County created from Yuma County in 1983.

SOURCE: Arizona Agricultural Statistics, 1984. See above.



SOURCE: Arizona Agricultural Statistics, 1984

CARL PERKINS VOCATIONAL EDUCATION ACT TAPE PRESENTATION AVAILABLE

The Arizona State Occupational Information Coordinating Committee (ASOICC) has received a copy of the color slide/cassette tape presentation on the Carl D. Perkins Vocational Education Act.

The 45-minute program is part of the National Occupational Information Coordinating Committee's ongoing effort to ensure that all states and territories are informed about legislation that impacts on vocational education and coordination between the labor market and the education community, and among federal agencies and the states. The project was produced by the Office of Vocational and Adult Education of the U.S. Department of Education.

The Carl Perkins Vocational Education Act went into effect July 1, 1985, with the acceptance of new state plans. Since the act represents a major shift of federal funding to states for program improvement and expansion, many questions have been raised about its implementation. This slide/tape presentation is answering some of those questions.

For additional information, readers may contact Stan Butterworth, executive director of the Arizona State Occupational Information Coordinating Committee (ASOICC) at (602) 255-3680. Mail inquires may be sent to Stan at Site 897J, P.O. Box 6123, Phoenix, Arizona, 85005.

ARIZONA UNEMPLOYMENT INSURANCE ACTIVITIES - SEPTEMBER 1985

	September 1985	August 1985	September 1984	From One Year Ago
Arizona Claimants Served*	35,300	33,526	26,640	+32.5%
Arizona Average Weeks Unemployed**	9.5	9.7	10.7	-11.2%
Arizona Benefits Paid*	$ 9,200,438	$ 10,532,629	$ 7,837,731	+17.4%
Arizona Trust Fund Balance	$314,717,862	$321,324,292	$225,830,260	+39.4%

*All Programs **UI Only

THE ARIZONA LABOR FORCE IN OCTOBER

While the ranks of the unemployed in Arizona swelled by 2,300 in October, the growth in employment was strong enough to prevent a rise in the unemployment rate. This pattern is typical of the course the state economy has followed for most of this year: a continued expansion of services-related employment has mitigated the impact of a slump in Arizona's goods-producing industries.

This combination of factors has resulted in an unusual distinction for Arizona. Over the last twelve months since September 1984, Arizona was one of two states to record a wage and salary employment growth rate in excess of 5 percent. During the same time period, the increase of two percentage points in Arizona's unemployment rate was the largest increase observed among the 50 states. Growth in population and commercial activity have created a rising demand for a full range of services in spite of manufacturing layoffs and a slower pace in the construction sector. As Arizona's experience over the last twelve months clearly demonstrates, it is not necessarily inconsistent for rapid employment growth to be accompanied by a rising unemployment rate.

Construction employment fell by 600 in Arizona during October, with losses recorded in both of the state's major metropolitan areas. Most of the job losses in the nonmetropolitan areas were seasonal in nature, especially in the northern counties. Declining interest rates should prevent a substantial decrease in home building from occuring during the next few months. Nevertheless, employment in construction should continue to trend downward and probably will not rebound until the second half of 1986.

The manufacturing sector continued to report mixed results in October. Statewide, about 100 jobs were added last month, but losses were observed in the durable goods categories. Producers of electrical and electronic equipment have been reducing payrolls for months, and October was no exception. With even more layoffs in the works, the near term outlook for these firms is grim. There are signs that the slump in the semiconductor industry has reached bottom, but it will be several months at least before significant increases in production and hiring can be anticipated.

Meanwhile, Arizona's defense contractors, especially the aerospace companies, continue to expand at a rapid clip. Since there seems to be little risk of cuts in defense procurement budgets in the foreseeable future, these firms can be expected to continue adding to their work forces. In the nondurable goods sector, over 100 jobs were created in October, many of them in southern Arizona. Most of the increases were in food processing and apparel manufacturing, which usually show an increase at this time of year.

The trade, finance, services, and government sectors all are creating jobs at an impressive rate. Although this does reflect a national trend, the growth observed in Arizona has been exceptional. Retail trade establishments are responding to rapid population growth as well as to the upcoming holiday and tourism seasons. Finance, insurance, real estate, medical, and other services also have added large numbers of workers even while the overall economic growth rate has slowed, and these industries are expanding throughout Arizona, not just in the larger cities. Employment in schools, colleges, and state and local governments continues to rise, but October's government employment totals are somewhat inflated by temporary increases related to the special census in Maricopa County.

The prospects for the continued growth of the regional economy are good. Arizona appears to have a solid foundation of tourism, government, and defense manufacturing that will prevent a severe or prolonged downturn. However, the slump in high technology manufacturing, combined with an expanding population base, will likely result in a rising rate of unemployment as the state moves into 1986.

Brian Cary

Arizona Labor Force and Employment

October 1985 (in thousands)

	ARIZONA				
				-- Amt Change --	
	Oct.* 1985	Sep. 1985	Oct. 1984	Sep. to Oct.	1984 to 1985
TOTAL CIVILIAN LABOR FORCE**	1473.6	1450.7	1462.5	+22.9	+11.1
Total Unemployment	94.9	92.6	63.9	+2.3	+31.0
Rate	6.4	6.4	4.4	---	---
Rate (Sea. Adj.)***	6.5	6.5	4.5	---	---
Total Employment	1378.7	1358.1	1398.6	+20.6	-19.9

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	Oct.* 1985	Sep. 1985	Oct. 1984	Sep. to Oct.	1984 to 1985
TOTAL WAGE AND SALARY	1279.1	1261.4	1216.0	+17.7	+63.1
Manufacturing	183.2	183.1	177.6	+0.1	+5.6
Durable Goods	144.5	144.5	139.8	+0.0	+4.7
Stone, Clay and Glass	8.4	8.4	7.5	+0.0	+0.9
Primary and Fabricated Metals	16.5	16.3	17.1	+0.2	-0.6
Primary Metals	7.1	7.0	7.4	+0.1	-0.3
Fabricated Metals	9.4	9.3	9.7	+0.1	-0.3
Machinery	68.3	69.1	70.0	-0.8	-1.7
Other Durable Goods	51.3	50.7	45.2	+0.6	+6.1
Aircraft and Missiles	23.9	23.6	20.3	+0.3	+3.6
Lumber and Wood Products (Except Furniture)	8.0	7.9	7.3	+0.1	+0.7
All Other Durable Goods	19.4	19.2	17.6	+0.2	+1.8
Nondurable Goods	38.7	38.6	37.8	+0.1	+0.9
Food and Kindred Products	8.6	8.6	8.4	+0.0	+0.2
Apparel	5.1	5.0	5.0	+0.1	+0.1
Printing and Publishing	14.3	14.2	14.0	+0.1	+0.3
All Other Nondurable Goods	10.7	10.8	10.4	-0.1	+0.3
Mining and Quarrying	11.2	11.2	12.7	+0.0	-1.5
Copper Mining	8.5	8.5	9.8	+0.0	-1.3
Other Mining and Quarrying	2.7	2.7	2.9	+0.0	-0.2
Construction	109.2	109.8	100.9	-0.6	+8.3
Trans., Communications, and Public Utilities	63.5	63.0	61.4	+0.5	+2.1
Transportation	28.5	28.5	28.6	+0.0	-0.1
Communication and Public Utilities	35.0	34.5	32.8	+0.5	+2.2
Trade	307.6	302.7	294.6	+4.9	+13.0
Wholesale Trade	63.0	62.7	60.3	+0.3	+2.7
Retail Trade	244.6	240.0	234.3	+4.6	+10.3
General Merchandise and Apparel	39.3	38.4	39.4	+0.9	-0.1
Food Stores	37.2	36.9	35.4	+0.3	+1.8
Automotive and Service Stations	29.4	29.4	27.8	+0.0	+1.6
Eating and Drinking Places	86.7	84.5	81.4	+2.2	+5.3
Other Retail Trade	52.0	50.8	50.3	+1.2	+1.7
Finance, Insurance, and Real Estate	78.7	77.8	72.9	+0.9	+5.8
Services and Miscellaneous	299.9	296.7	280.2	+3.2	+19.7
Hotels and Other Lodging Places	31.9	30.4	29.1	+1.5	+2.8
Business Services	69.0	69.3	63.7	-0.3	+5.3
Health Services	72.0	71.7	69.2	+0.3	+2.8
Other Services	127.0	125.3	118.2	+1.7	+8.8
Government	225.8	217.1	215.7	+8.7	+10.1
Federal	43.1	40.8	39.5	+2.3	+3.6
State and Local	182.7	176.3	176.2	+6.4	+6.5
School	109.1	103.3	107.6	+5.8	+1.5

* Preliminary

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

NOTE--Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment

October 1985 (in thousands)

MARICOPA COUNTY					PIMA COUNTY				
			-- Amt Change --					-- Amt Change --	
Oct.* 1985	Sep. 1985	Oct. 1984	Sep. to Oct.	1984 to 1985	Oct.* 1985	Sep. 1985	Oct. 1984	Sep. to Oct.	1984 to 1985
937.5	919.0	927.3	+18.5	+10.2	266.2	264.1	265.4	+2.1	+0.8
48.0	46.3	31.0	+1.7	+17.0	14.3	13.8	11.2	+0.5	+3.1
5.1	5.0	3.3	---	---	5.4	5.2	4.2	---	---
5.1	5.1	3.4	---	---	5.4	5.4	4.2	---	---
889.5	872.7	896.3	+16.8	-6.8	251.9	250.3	254.2	+1.6	-2.3

E USED FOR ECONOMIC ASSISTANCE PROGRAMS

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

MARICOPA COUNTY					PIMA COUNTY				
840.3	825.4	794.0	+14.9	+46.3	231.5	230.3	219.0	+1.2	+12.5
131.1	131.4	128.8	-0.3	+2.3	32.2	32.2	29.6	+0.0	+2.6
104.7	104.9	103.0	-0.2	+1.7	27.0	27.0	24.5	+0.0	+2.5
5.1	5.1	4.5	+0.0	+0.6					
10.9	10.8	11.0	+0.1	-0.1					
54.3	55.2	56.3	-0.9	-2.0					
34.4	33.8	31.2	+0.6	+3.2					
26.4	26.5	25.8	-0.1	+0.6	5.2	5.2	5.1	+0.0	+0.1
5.3	5.3	5.2	+0.0	+0.1					
3.2	3.2	3.0	+0.0	+0.2					
10.4	10.4	10.3	+0.0	+0.1					
7.5	7.6	7.3	-0.1	+0.2					
0.6	0.6	0.6	+0.0	+0.0	2.4	2.4	2.9	+0.0	-0.5
75.4	75.6	69.2	-0.2	+6.2	21.4	21.5	19.0	-0.1	+2.4
41.8	41.7	39.9	+0.1	+1.9	8.8	8.9	9.0	-0.1	-0.2
19.5	19.5	19.2	+0.0	+0.3	4.0	4.1	4.2	-0.1	-0.2
22.3	22.2	20.7	+0.1	+1.6	4.8	4.8	4.8	+0.0	+0.0
209.8	205.2	200.6	+4.6	+9.2	50.1	49.9	48.4	+0.2	+1.7
49.7	49.5	48.2	+0.2	+1.5	7.6	7.5	6.7	+0.1	+0.9
160.1	155.7	152.4	+4.4	+7.7	42.5	42.4	41.7	+0.1	+0.8
24.8	24.1	24.9	+0.7	-0.1	7.3	7.2	7.6	+0.1	-0.3
23.8	23.5	22.5	+0.3	+1.3	5.9	5.9	5.7	+0.0	+0.2
18.9	18.8	17.7	+0.1	+1.2	4.6	4.7	4.4	-0.1	+0.2
56.3	54.1	52.2	+2.2	+4.1	15.9	15.8	15.3	+0.1	+0.6
36.3	35.2	35.1	+1.1	+1.2	8.8	8.8	8.7	+0.0	+0.1
61.7	61.0	56.9	+0.7	+4.8	10.9	10.8	10.2	+0.1	+0.7
203.4	200.8	190.6	+2.6	+12.8	57.0	56.2	51.4	+0.8	+5.6
19.0	17.7	17.3	+1.3	+1.7	5.0	4.6	4.3	+0.4	+0.7
56.0	56.4	52.4	-0.4	+3.6	10.2	10.2	8.8	+0.0	+1.4
47.5	47.4	47.3	+0.1	+0.2	15.6	15.5	13.8	+0.1	+1.8
80.9	79.3	73.6	+1.6	+7.3	26.2	25.9	24.5	+0.3	+1.7
116.5	109.1	107.4	+7.4	+9.1	48.7	48.4	48.5	+0.3	+0.2

-- Prepared by Labor Market Information, Research and Analysis (CPS, 1/85)

NONMETROPOLITAN COUNTIES
LABOR FORCE AND EMPLOYMENT
October 1985

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL CIVILIAN LABOR FORCE*.	15,425	28,975	37,250	12,650	7,825	2,175	4,825
Total Unemployment	2,425	2,400	3,225	1,575	925	375	900
Rate	15.7%	8.3%	8.7%	12.5%	11.8%	17.2%	18.7%
Rate (Seas. Adj.)**. . . .	15.9%	8.7%	9.4%	12.3%	11.7%	17.0%	-INA-
Total Employment	13,000	26,575	34,025	11,075	6,900	1,800	3,925

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL WAGE AND SALARY. . . .	14,800	23,475	34,850	9,775	4,825	1,850	2,475
Manufacturing.	775	2,200	2,650	1,275	175	50	75
Mining and Quarrying	25	175	25	1,625	25	700	0
Construction	950	1,350	1,575	475	150	75	75
Trans., Comm., & Pub. Util..	1,825	1,500	2,650	325	175	50	50
Trade.	1,425	5,025	7,925	1,900	1,325	275	825
Fin., Insur., & Real Estate.	275	625	775	250	150	25	75
Services and Miscellaneous .	4,150	3,075	8,200	1,625	800	100	600
Government	5,375	9,525	11,050	2,300	2,025	575	775

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL CIVILIAN LABOR FORCE*.	24,400	25,500	31,650	9,175	33,225	36,775
Total Unemployment	2,725	3,325	3,950	1,950	2,100	6,625
Rate	11.2%	13.0%	12.5%	21.3%	6.3%	18.0%
Rate (Seas. Adj.)**. . . .	11.4%	13.7%	12.4%	18.9%	6.6%	-INA-
Total Employment	21,675	22,175	27,700	7,225	31,125	30,150

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL WAGE AND SALARY. . . .	18,100	18,925	25,750	7,875	20,375	24,000
Manufacturing.	2,425	1,825	3,425	1,075	2,250	1,650
Mining and Quarrying	300	1,100	3,575	0	600	50
Construction	1,475	1,000	1,100	325	1,950	1,875
Trans., Comm., & Pub. Util..	1,125	1,625	1,175	550	875	950
Trade.	5,150	3,450	4,575	2,925	5,225	7,700
Fin., Insur., & Real Estate.	875	350	700	250	800	900
Services and Miscellaneous .	3,500	4,875	2,750	1,250	4,075	4,400
Government	3,250	4,700	8,450	1,500	4,600	6,475

*Adjusted to the Current Population Survey (CPS) to reflect place of residence.
**Seasonal adjustment not applicable for economic assistance programs.

NOTE--Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

ARIZONA LABOR FORCE AND EMPLOYMENT FOR ECONOMIC ASSISTANCE PROGRAMS
October 1985

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,473,634	1,378,758	94,876	6.4%
Apache	15,424	12,988	2,436	15.8
Cochise	28,986	26,578	2,408	8.3
Coconino	37,251	34,023	3,228	8.7
Gila	12,652	11,082	1,570	12.4
Graham	7,830	6,916	914	11.7
Greenlee	2,171	1,793	378	17.4
La Paz	4,824	3,928	896	18.6
Maricopa	937,527	889,516	48,011	5.1
Mohave	24,392	21,662	2,730	11.2
Navajo	25,499	22,180	3,319	13.0
Pima	266,246	251,902	14,344	5.4
Pinal	25,499	25,499	3,319	13.0
Santa Cruz	9,184	7,229	1,955	21.3
Yavapai	33,219	31,107	2,112	6.4
Yuma	36,783	30,158	6,625	18.0

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators. Note: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

ESTIMATED HOURS AND EARNINGS OF PRODUCTION WORKERS IN SELECTED INDUSTRIES IN ARIZONA
October 1985

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVG. HOURLY EARNINGS		
	OCT.* 1985	SEP. 1985	OCT. 1984	OCT.* 1985	SEP. 1985	OCT. 1984	OCT.* 1985	SEP. 1985	OCT. 1984
FOR THE STATE OF ARIZONA*									
Manufacturing	391.78	390.67	372.50	40.1	40.4	40.8	9.77	9.67	9.13
Aircraft & Missiles	INA	INA	INA	INA	INA	INA	INA	INA	INA
Food & Kindred Products	330.24	341.25	310.87	38.4	39.0	39.4	8.60	8.75	7.89
Primary Metals	496.52	479.88	491.25	39.5	38.7	39.3	12.57	12.40	12.50
Machinery	354.71	356.11	321.12	39.5	39.7	40.7	8.98	8.97	7.89
Copper Mining	569.38	577.40	560.77	41.5	42.3	41.6	13.72	13.65	13.48
Construction	424.04	444.80	428.35	34.9	36.7	36.8	12.15	12.12	11.64
Utilities	574.67	574.67	541.68	42.6	42.6	43.3	13.49	13.49	12.51
Retail Trade**	244.15	243.88	235.58	33.4	33.5	34.9	7.31	7.28	6.75
Wholesale Trade	354.75	358.29	359.60	37.5	37.4	39.3	9.46	9.58	9.15

* Preliminary

** Excludes eating and drinking places.

NOTE--These estimates are based on a sample of full and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

--Prepared by Labor Market Information, Research and Analysis (1972 SIC, 1/84)

UNION MEMBERSHIP--DECLINING OR SHIFTING?

Membership in labor organizations grew by almost 37 percent in Arizona during the 1970s. However, during the same time period, total wage and salary employment expanded by more than 85 percent. Since employment has grown more rapidly than has membership, the percentage of employees who are members of a labor organization has declined from 21.4 percent in 1970 to 15.8 percent in 1980. Data for the United States as a whole reveal a similar decline in percentage.

Labor Organization Membership*
(in thousands)

	1970	1974	1978	1980
Arizona:				
Wage and Salary Employment**	547	746	895	1,014
Membership***	117	156	159	160
Percent of Employment	21.4%	20.9%	17.8%	15.8%
United States:				
Wage and Salary Employment****	70,880	78,265	86,697	90,406
Membership***	21,852	23,408	23,306	22,811
Percent of Employment	30.8%	29.9%	26.9%	25.2%

* NOTE: Includes both unions and employee associations.

** SOURCE: Arizona Department of Economic Security, Current Employment Statistics.

*** SOURCE: Bureau of Labor Statistics in *Statistical Abstract of the United States 1985*.

**** SOURCE: *Employment and Earnings*.

According to a report by William T. Dickens and Jonathan S. Leonard, a number of factors have contributed to the decline in the unionized share of the U.S. work force. They studied three possible explanations for the decline:

1. The net growth in union membership due to economic causes was negative in the 1970s.
2. The rate of organization has declined.
3. The success rate of union organizing has dropped.

Dickens and Leonard found that although the economic deterioration of highly unionized industries in the 1970s might appear to explain the decline, that explanation is not consistent with the fact that there have been periods, such as the early 1960s, when net growth in union membership from economic causes was more negative than in the 1970s, but more successful organizing activity took place than in the 1970s. In addition, the proportion of the work force organized within those highly unionized industries fell during the years when employment in those industries was growing.

Those researchers concluded that depressed rates of union organization and reduced success rates appear to represent structural change that cannot be expected to disappear if the economy improves. Those low rates could be explained by either a decrease in the extent and intensity of union organizing or by a decreased willingness of workers to join unions. There could be attitudinal changes concerning unions or an increase in management resistance. The data presented by Dickens and Leonard are in the following table.

Components of Union Growth - United States
(Five-year Averages)

	1960-64	1965-69	1970-74	1975-79
Percent Union*	31.2%	29.0%	27.2%	23.8%
Organizing Rate**	1.56	1.46	1.25	.97
Success Rate	55%	55%	46%	37%
Decertification Rate***	.12	.10	.14	.23
Success Rate	49%	42%	48%	54%
Labor Force Growth Rate****	1.6	3.7	1.9	3.0
Union Membership Growth Rate	-0.7	2.2	0.6	-1.0
Net Growth Due to Representation Elections	1.6	1.8	1.3	.9
Net Growth Due to Economic Causes	-2.3	0.4	-0.7	-1.9

* Percentage of all private nonagricultural nonconstruction employees who are members of national labor unions or local affiliates of national labor unions.

** Percentage of all previously unorganized private nonagricultural employees who were eligible to vote in NLRB certification elections.

*** Percentage of all workers eligible to vote in decertification elections divided by total union membership.

**** Private nonagricultural nonconstruction labor force.

Richard B. Freeman and James L. Medoff, authors of What Do Unions Do?, also identified three possible explanations for the dropping union share of U.S. employees:

1. changing economic structure;
2. decline of union organizing efforts; and
3. growth of managerial opposition.

The changing economic structure reflects a reduced proportion of the work force in groups traditionally highly unionized (e.g. manufacturing) and an increased proportion in groups traditionally nonunion (e.g. white-collar jobs, women). However, Freeman and Medoff noted problems with accepting an explanation based on economic structure. They found that the same changes have occurred in all of the major Western economies, yet their unionism has increased. In addition, union growth has historically taken the form of sudden organization of traditionally nonunion groups, such as public employees.

In surveys asking if workers would vote for a union if they had the opportunity to do so, both young and female workers express as much pro-union sentiment as do older or male workers. One group which could form the basis of a spurt in unionization is the white-collar workers of the baby boom generation. Many of those with some college education have wages and career advancement far below their expectations.

Freeman and Medoff found that structural factors increase or decrease the difficulty of organization, but those factors do not determine unionization. Union organizing efforts do appear to impact heavily on unionization. The resources spent on organizing in a union's jurisdiction is a major determinant of unionization. As much as a third of the decline in union success through National Labor Relations Board (NLRB) elections can be linked to reduced organizing activity.

Freeman and Medoff also discovered that from one-fourth to one-half of the decline in union voting success can be attributed to rising management opposition. Forms of management opposition can include positive labor relations, legal campaigns to convince workers to vote against a union, or illegal firing of pro-union workers.

A different viewpoint on the difficulties in the labor movement has been presented by Stanley Aronowitz, author of Working Class Hero. He identified three causes of labor's problems:

1. shift in the regional centers of the American economy;
2. transformations in the technological composition of labor; and
3. transformations in the international division of labor.

A shift in regional economic centers is the result of a long-term decentralization of industries from the large cities of the Northeast and Midwest to suburban and rural areas. Technological changes have accelerated a shift away from manual labor toward intellectual labor. Furthermore, the United States has become a leading producer of technology and administration for the world production of goods, but a declining producer of material goods. Aronowitz concluded that the combined effects of those three factors have resulted in reductions of between 20 and 30 percent in the membership of major industrial unions.

Philip M. Doyle analyzed data from the Bureau of Labor Statistics' (BLS) area wage surveys in order to determine the significance of shifts in the industrial, occupational, regional, and demographic composition of the labor force on declines in unionization.

Those BLS wage surveys do have some limitations in that they cover only 70 Standard Metropolitan Statistical Areas (SMSAs) and are restricted to establishments employing at least 50 workers in the following industries: manufacturing; transportation, communications, electric, gas, and sanitary services; trade; finance, insurance, and real estate; and selected services. Excluded from the survey coverage are construction and mining (traditionally heavily unionized industries), government, private and public schools, and health care facilities.

Nevertheless, Doyle was able to identify some trends. He found that of the 22 percent reduction in union coverage of production workers from 1961 to 1984, about one-third could be attributed to shifts from regions and industries where unions have traditionally been strongest. For office workers, regional and industrial shifts accounted for almost half of their 5 percent decline in union coverage. Over that same time period, average employment size in the surveyed establishments decreased by 16 percent. Since unionization tends to occur in larger firms, the decrease in establishment size may have also impacted on union coverage.

Doyle concluded that shift effects explain only part of the decline in union coverage. A variety of forces are involved, including the appeal of unionism to individual workers, the ease or difficulty of union organizing, and government deregulation. The latter factor has contributed to the unionization decline by stimulating competition, partly from unorganized firms in trucking, airlines, and communications.

Another source of data on unionization is the Current Population Survey (CPS), conducted by the U.S. Bureau of the Census. Although the sample size is too small to obtain reliable data on Arizona, national data reveal some occupational shifts within union membership.

Edward C. Kokkelenberg and Donna R. Sockell did a study of CPS data, from 1973 to 1981, and found that unionization was increasing among professionals such as librarians, physicians, nurses, and teachers and among other white-collar employees such as secretaries. Highly educated employees, women, and blacks are also increasing their percentages of unionization. Decreases were evident in traditionally unionized occupations including machinists, plumbers, telephone-line workers, miners, carpenters, and heavy-equipment mechanics.

In addition, large increases were noticed in the percentage of workers organized in primary and secondary schools, universities, local and state government, hospitals, and libraries.

How does Arizona's labor situation compare to that of the rest of the nation? Although

Arizona's membership in labor organizations has been growing over the years, Arizona has considerably less union activity than many other states. Only nine states have percentages of employment unionized lower than Arizona's. According to the Directory of U.S. Labor Organizations, Arizona ranks 37 in the number of unions reporting under the Labor-Management Reporting and Disclosure Act (LMRDA) and the Civil Service Reform Act (CSRA).

Arizona has a "right-to-work" law which prohibits the "union shops" that are prevalent in the more heavily unionized states. Nevertheless, unions have had a great impact on various sectors of Arizona's economy, particularly copper mining, construction, and some parts of manufacturing.

Barbara Keene

SOURCES:

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NEW DEVELOPMENTS

GATES LEARJET RELOCATION - Disappointing Tucson and state officials who had hoped otherwise, Gates Learjet Corporation decided in mid-November to move its manufacturing operations to Wichita, Kansas. The move will result in the layoff of 500 to 550 of the company's 815 Tucson employees. The 200 or so employees remaining will be in the corporate headquarters, marketing, and customer service departments of Gates which, at least for now, will remain in Tucson. James B. Taylor, Gate's president and CEO, tried to stress the positive aspect of the corporate headquarters remaining and added that laid-off employees will receive their vacation and sick-leave time, as much as six weeks of severance pay, early-retirement inducements, and continuation of health insurance and counseling for two months after the layoff which takes place December 13, 1985. Taylor said poor decisions have lead to the company's financial problems and need for consolidation.

PLANT SHUTDOWNS - More bad news for the electronics industry. Data Packaging Corporation, which has manufactured computer reels and plastic boxes at 425 South 67th Street for about 11 years, shutdown operations November 1, laying off all of its 80 management and production employees. Company officials said the closing was the result of a significant reduction in demand for its computer-related products and the failure of new products to meet projected sales goals. Employees received severance pay, an extension of benefits, and assistance in finding new jobs.

Digital Applications Incorporated of Phoenix, a printed wiring boards manufacturer, ceased operations at the end of October and layed off its 40 employees. Company officials said the decision was based on continuing losses, declining order backlog, and a changing market that is shifting overseas.

Arizona Labor Market Newsletter
LABOR MARKET INFORMATION PUBLICATIONS
Site Code 733A
P.O. Box 6123
Phoenix, Arizona 85005

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1/29/86 S0465-1A

ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. X No. 1
January 1986

Unemployment Rate

Seasonally Adjusted
November*

ARIZONA	6.5%
Maricopa Co.	5.1%
Pima Co.	5.7%
UNITED STATES	7.0%

Consumer Price Index

National-November
1967 - Base Year

Wage Earner/Clerical Worker -	322.6
% Chg. Yr. Ago	3.4
All Urban -	326.6
% Chg. Yr. Ago	3.6

Phoenix-3rd Qtr.
1977 - Base Year

All Urban -	191.4
% Chg. Yr. Ago	4.5

Producer Price Index

National-November*
1967 - Base Year

All Commodities	309.7
% Chg. Yr. Ago	-0.2
Finished Goods	296.7
% Chg. Yr. Ago	1.5

* Preliminary

Service Employment Growth: A Benefit to the Economy?

Along with death and taxes, economic change is inevitable. Where once our economy was built upon agriculture and mining, these industries have given way to high technology manufacturing (electronics and aerospace) along with a dominant service industry. Although high tech companies have a snazzy appeal that spark our imagination and make a great speech topic, they account for less than one out of every 10 jobs in the state.

Meanwhile, the service-producing side of the economy, which includes finance, insurance, and real estate (FIRE); trade; transportation, communications, and public utilities (TCPU); services; and government currently accounts for just over three out of every four jobs in Arizona's economy. With all these jobs in services, many people have come to the conclusion that an increasing number of people are being forced into low wage, dead-end jobs. The implications for the general public, policy makers, and particularly those involved in employment and training programs are clear. What is not as clear is the actual situation.

In 1970, employment in the United States was split such that 33.3 percent of the jobs were in the goods-producing side of the economy (mining, construction, and manufacturing), while 66.7 percent were in the service-producing side. (See Figure 1.) In Arizona, where tourism was very important

Arizona Department of Economic Security

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Arizona Labor Market Information Newsletter
WINNER OF THE ICESA 1985 LMI PUBLICATION AWARD

Nancy Augustin, editor
Processed by RA Clerical Support Unit

and the manufacturing sector had not yet begun to develop, the job split between goods-producing and service-producing was 27.2 percent and 72.8 percent respectively. Comparing that situation to the situation in 1984, (see Figure 2), the national economy has become considerably less dependent on goods production. In fact, nearly 23.6 million net new jobs were created nationally between 1970 and 1984, with over 95 percent of those new jobs being created in the services side of the economy. And, in Arizona the net job increase of 633,400 over that period was also concentrated in services, where over 79 percent of the new jobs occurred.

Here in Arizona, the goods-producing side of our economy has always been relatively small. If it were not for the fact that our rapidly growing economy employs a large number of people in the construction industry, services would be even more important. Many people look at Arizona as the precursor of the economic landscape that the nation can expect in the years to come. And if the structural change that has occurred between 1970 and 1984 continues, as likely it will, we will continue to see an employment shift away from our traditional manufacturing industries.

As a matter of economic development, these changes are not surprising. Most economies

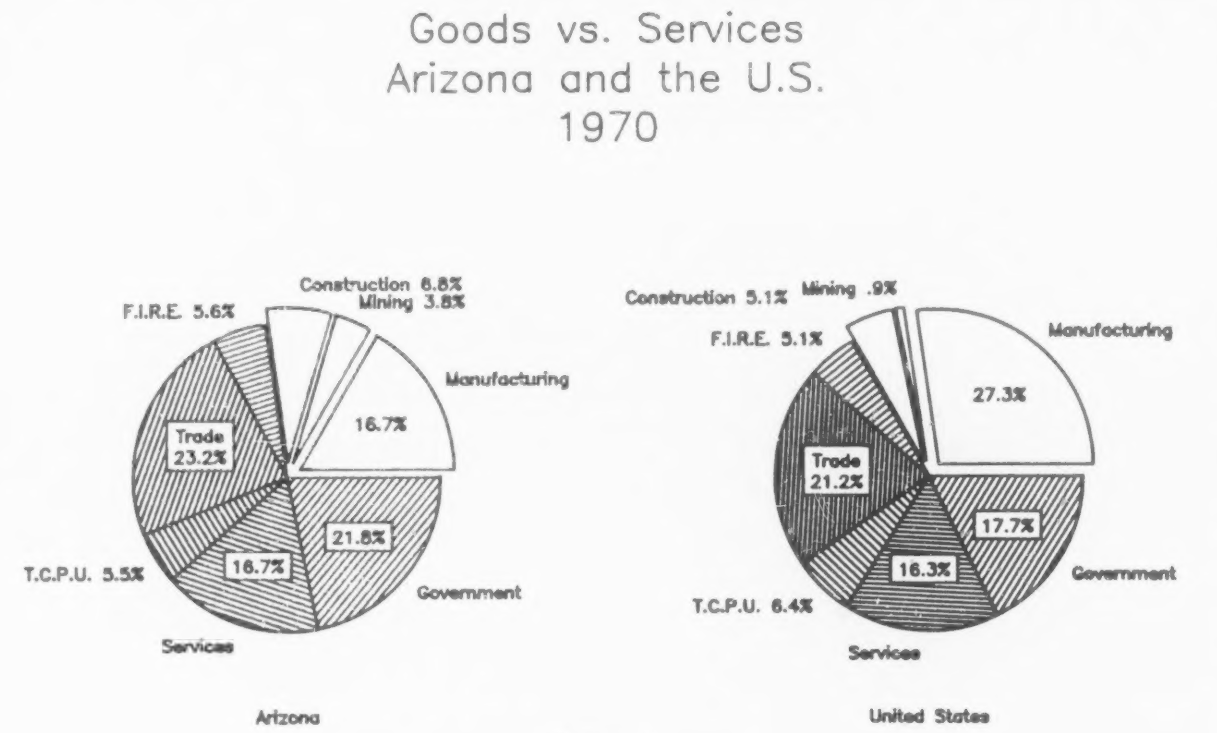


Figure 1

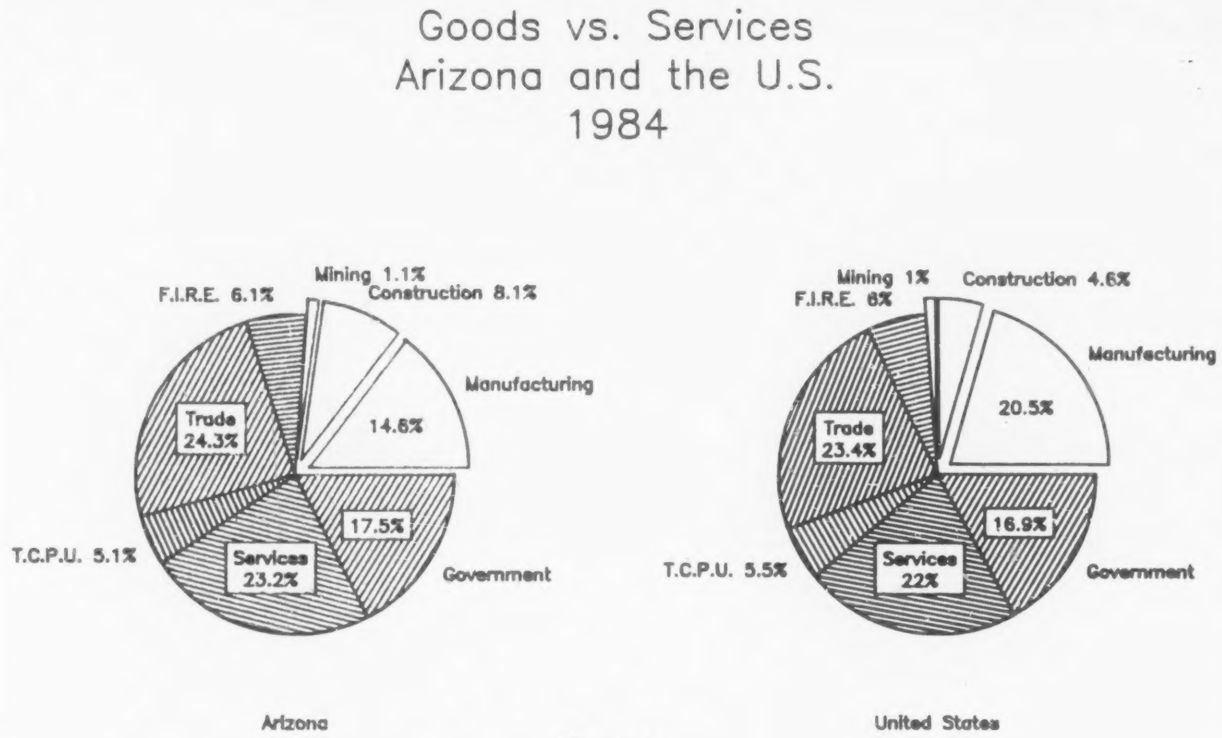


Figure 2

begin by using their natural resources to start the process of development. Here in Arizona, that meant heavy dependence on agriculture, mining, and tourism. Then as these businesses began to mature, manufacturing activities began to expand. The expansion continued until a sufficient surplus of resources was available to permit an expansion of services. If anything, the transition of our economy toward greater dependence on services indicates our growing affluence. In the progression of economic development, society can not afford the investment of resources in leisure activities, health care, education, and personal services if agriculture, manufacturing, and the other goods-producing industries are not sufficiently productive.

If the expected trend of both our local and national economies is in the direction of greater employment in service businesses, what does that mean for job seekers and those involved in developing our labor force for the future? One observation is clear--jobs in the future will require people to become more productive. Just as agriculture has been able to expand production at the same time that employment has been declining, employers in the future will look to raise productivity where labor is a major cost of doing business. And since labor costs are a considerably larger share of total expenses in services than they are in manufacturing, workers in the service industries will need to be better equipped to handle these changes.

But just as technological advances were not a source of wide-spread layoffs in manufacturing, as many people had expected, so too it is expected that increased productivity will free resources to be used in other endeavors. The challenge to our economy is to provide a sufficiently strong set of skills to our labor force so that as these changes occur, they will have the tools to take advantage of new opportunities.

Looking ahead to 1991, we expect job opportunities to expand by about 28 percent. While this is not a terribly strong five year growth rate as compared to the rate in the late 1970s, it will continue to keep Arizona near the top among other states. The majority of new jobs will remain in the classical entry-level positions of retail salesperson, general office clerk, waiter/waitress, bookkeeping clerk, cashier, and other such jobs, but many relatively large job classifications are expected to have above average growth rates. (See Table 1.)

Table 1
Occupations Expected to Grow Over 35 Percent

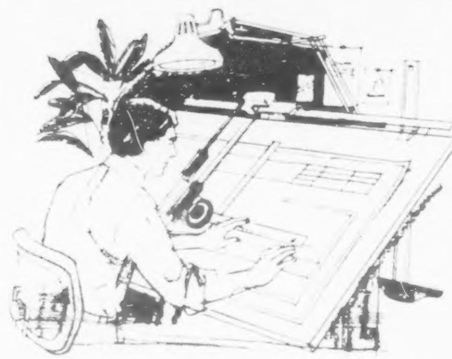
	Projected Job Growth 1986-1991*	Percent
Electronic Engineers	4,684	42%
Precision Electronic Assemblers	5,439	55
Guards	3,316	36
Electronic Technicians	3,404	41
Hairdressers	2,163	36
First Line Managers	2,037	37
Assemblers/Fabricators	1,980	36
Drafters	1,946	37
Precision Inspectors	1,846	44
Mechanical Engineers	1,338	41
Carpenter Helpers	1,200	37
Legal Secretaries	1,093	37
Electronic Semiconductor Processors	1,761	60
Production Clerks	1,060	40
Electronic Assemblers	1,362	52
Marketing Managers	866	39
Industrial Engineers	868	41
Administrative Managers	768	38

*Job growth in Arizona, ranked in descending order by total employment, of occupations employing more than 2,000 people in 1986.

A few important items need to be considered in reviewing the impact of services jobs on the labor force. A cursory view of these jobs show that many pay below average wages. But a closer look at the statistics show that more than 20 percent of workers in services are employed under 30 hours a week. This has a significant influence on average wage. And it is also important to realize that while there are many entry-level positions in the service industries, they are just that--entry-level. As the economy continues to grow, more job opportunities will be created. And as the population ages, either retiring or moving into part-time employment, other opportunities will open for advancement.

And if it were true that the service industries were in fact low wage employers, our shift toward a greater share of employment in the service sectors should be reflected in lower average annual pay. But such is not the case. In 1979, when 74.2 percent of our jobs were in the service-producing side of the economy, Arizona ranked 26th among the 50 states and the District of Columbia--right in the middle. And by 1984, when our share of employment in services had risen to 76.1 percent, Arizona still ranked 26th among the 51 areas. And while many people still view Arizona as a low wage state, our wages average 95 percent of the national average. While still below the national average, it is not as much below as many people believe.

So why is this happening and why do many people view service jobs with disdain? As mentioned earlier, our economy is continuing to evolve. Many of the jobs that will be created in the future will not be in our traditional manufacturing industries. Greater international competition and its emphasis on development places us in a position where we must make use of our labor force wisely. Given the relatively high educational level of our population and the productivity of many industries, we need to concentrate our resources where we are most likely to get the best return. In many cases, the direction our economy has taken has emphasized service-related jobs. But the conclusion that many people have drawn that these are undesirable jobs is not necessarily true, as the material above demonstrated. Many entry-level jobs do exist here, but since this is an area of strong growth, many other jobs are opening too. Occupations such as accountant, financial planner, computer programmer, and many different jobs in the business services and personal services areas will grow also. It would be simply inaccurate to lump all these jobs together and consider it an undermining of our economy. More accurately it is a shift away from jobs that emphasize manual processes to jobs that require more mental involvement.



With the changing nature of employment, it is important that we have a trained labor force that is equipped to take advantage of these changes. That means a range of skills that can fit the labor market demands now, but with sufficient flexibility to learn the skills necessary to be productive in the future. Considering the changing nature of services and its strong potential for Arizona's economy, employment growth in the service-producing industries continues to be a positive part of Arizona's economy.

Dan Anderson

Arizona SOICC Hosts Western Regional Meeting

Occupational information issues and multistate cooperation were discussed by representatives from seven Western states at the Phoenix Hotel Westcourt on December 2-3. State Occupational Information Coordinating Committee (SOICC) directors of six states and Labor Market Information, Research and Analysis (LMI, R&A) chiefs from Arizona and New Mexico compared experiences in developing occupational information for diverse users.

Arizona Department of Economic Security Deputy Director Bette DeGraw welcomed the attendees to Arizona. Dr. Gloria Becerra, assistant director, Division of Employment and Rehabilitation Services, opened the discussions with a view of the future for organizations like the SOICC. She asserted that vehicles to enhance cooperation would be increasingly necessary in order to get the greatest mileage from the dwindling dollars available for human services. In Arizona, she said, there is an Interagency Coordinating Committee that meets regularly to discuss means of leveraging each other's funds for maximum effectiveness. Members of the committee include policy makers and administrators from Job Service, Job Training Partnership Act Administration, Vocational Rehabilitation, Vocational Education, Department of Commerce, and other related agencies. This committee also serves as the steering committee for the Arizona SOICC. Dr. Becerra concluded with an observation that employment and training agencies, and especially their research and data producing sections, need a new kind of manager. They need managers who are technically competent, but more than that they need managers who can maintain a broad view. In other words, these managers should be seeking ways to make their agencies' data useful to the greatest number of users in order to facilitate the efforts of administrators and operations managers to leverage their dollars.

The director of the Colorado SOICC, Dr. Jim Harris, agreed whole-heartedly with Dr. Becerra. In fact, he hoped that the meeting of the several states' SOICCs would result in joint efforts among the states that would give greater effect to SOICC dollars. In addition, he hoped that the Western states could influence the direction of the national office (NOICC) on key issues by acting in concert.

As an example of successful multi-state cooperation, he reported Colorado and Utah's joint pilot project to attach occupational titles to the unemployment insurance Base Period Wage File (BPWF). The purpose in having employers report occupational titles, in addition to the other items they are now reporting, is to test the feasibility of obtaining occupational demand data directly from employers through a routine administrative report. If the pilot project is successful, the states could expand the requirement of occupational reporting to all employers. In the long run, the expanded BPWF could take the place of the Occupational Employment Statistics (OES) survey program. There would be a number of advantages to the administrative report over the OES survey. Because the BPWF is reported quarterly by social security number of employee, the data would be updated more frequently than the three-year survey-cycle based OES data. In addition, the BPWF includes quarterly wage data for each individual. With occupational titles attached, wages by occupation could be discerned, thus eliminating the need for a separate wage survey as well. Moreover, the data could be tracked to determine occupational turnover.

Of course, these benefits would accrue at a significant cost to employers who would have to supply the additional data. Determining a basis for estimating what that cost might be is part of the expected outcome of the Colorado/Utah pilot project. Utah is the state actually conducting the project. Dr. Harris said 68 employers have been randomly selected to participate in the project. Their participation is being encouraged by a payment to each employer from the Utah project. According to Max Parker, director of the Utah SOICC, it will be better than a year before an evaluation of the project is complete. Also, by that time, there may be data available from the state of Florida on a larger scale project of a similar kind. Florida has already passed legislation making occupational reporting mandatory for some employers.

During the remainder of the day, there were informal discussions about the feasibility and value of identifying new and emerging occupations, improving linkages, enhancing occupational information systems, promoting labor market information, and supporting career information delivery systems. Dan Anderson, research administrator for the Arizona Department of Economic Security, asked the directors if they would help him persuade the U.S. Bureau of Labor Statistics to allow the states' OES programs to carry an entire occupational matrix for each industry rather than rolling up minor occupations into catch-all categories. This unnecessary roll-up is causing the loss of a significant amount of useful data, he said. Jim Harris and Max Parker agreed they would bring up the issue to the BLS Occupational Employment Statistics project supervisor.

Day #2 of the meeting was opened by Trudy Rogers, acting director of the Comprehensive Training Unit, Arizona Department of Education. She discussed ways the Department of Education is cooperating with the Department of Economic Security in response to the mandates of the Job Training Partnership Act and the Carl Perkins Vocational Education Act Amendments. For instance, Vocational Education is funding two target group reports being produced by the Research Administration's Economic Analysis Section. One is a report on the condition of youth in Arizona labor markets and the other is an analysis of women's progress in moving into the labor market. Special problems of youth and women will be identified in these reports.

Vocational Education has found other ways to cooperate with DES througn participation on the Interagency Coordinating Committee that Dr. Becerra mentioned the day before. As an example, Vocational Education has supplied training for a substantial number of Trade Readjustment Act clients. Also, Vocational Education is in partnership in numerous projects with the Job Training Partnership Act Administration.

The Occupational Information System of Arizona is another project that has enjoyed Department of Education support over the years. The Arizona OIS was initiated by the ASOICC with funding from the national office (NOICC) as a mainframe data base system. In more recent years, as microcomputers became more sophisticated, a microcomputer-based OIS was developed. The Department of Education has funded the OIS, while the Research Administration has provided data from the OES program and the Job Service. The OIS is organizationally attached to the SOICC and the Economic Analysis section of the DES Research Administration.

The meeting concluded with adoption of several resolutions by the SOICC directors. The first was to name Stan Butterworth, director of the Arizona SOICC, to act as Western Regional Project Coordinator. It was agreed that the title and functions of that office would be bestowed on the director of whichever state hosted the annual regional meeting. Other actions included a resolution to pursue the OES roll-up problem with BLS, to advance support of using regression modeling as a means to enhance occupational training planning, and to influence the NOICC in the selection of a national meeting site.

Before closing, Dan Anderson proposed an alternative procedure to obtain occupational data to the one being investigated by Colorado and Utah. He said if it does not turn out to be feasible to have employers attach occupational titles or codes to the Base Period Wage File, perhaps someone could try using wage data from the Base Period Wage File to imply occupational staffing. In his estimation, it would be possible to distinguish among clerical, professional, and laborer occupational groups by the wages reported, at least for small employers. Specific staffing patterns could then be taken from the OES surveys of similar kinds of firms. He suggested, too, that other states consider using the Base Period Wage File to follow up trainees of vocational schools. In Arizona, legislation was passed last year to require private and public postsecondary schools to report social security numbers of their graduates to DES. The purpose is to permit follow-up matching with wage reports of employers and determine if the training resulted in greater earnings. A similar match will also be made for JTPA completers. This technique offers many opportunities for evaluation research.

Also in attendance at the regional meeting were Clair Cave, director, California SOICC; Nancy Hargis, director, Oregon SOICC; Ted Woodhouse, director, Washington SOICC; Bob Wells, director, Research and Analysis, New Mexico; David Ellis, representing Jose Gabriel Loyola, administrator, Arizona JTPA; Ron Simon, manager, Economic Analysis, Arizona Research Administration; Dr. Hugo Soll, manager, Arizona OIS; and Linda Kisinger, secretary, Arizona Research Administration.

Ron Simon

New OIS Reports for Vocational Planning and Counseling

The Occupational Information System (OIS) of Arizona has released a new "management-type" summary report designed for vocational program planners, administrators, and career counselors. The OIS Report #85-6, entitled 1985 OIS Cluster Summary Report summarizes a wide range of planning information. The report provides information in four sequences:

1) by vocational education program area;

2) ranked by 1985 occupational employment;

3) ranked by 1985 job openings; and

4) ranked by 1985 job openings minus training completers.

The cluster summaries include data on occupational demand and openings; training data for secondary schools, community colleges, proprietary schools, CBOs, and apprenticeships; Job Service data on openings, UI claimants, and wages.

The OIS of Arizona has also released OIS Report #85-7: 1984 Job Service Data-Statewide. The summary information in this report is presented in DOT Code sequence and includes the following:

Job Service applicants;

Unemployment Insurance claimants;

Job Service openings;

Job Service placements;

Job Service wage data;

percent openings to applicants; and

percent placements to openings.

The OIS project is a part of the Arizona State Occupational Information Coordinating Committee/DES Research Administration. It is funded primarily by the Arizona Department of Education-Vocational Education. Copies of both these reports may be obtained by writing Hugo H. Soll, manager, OIS of Arizona, at the address on the back of this Newsletter, or call 255-3680.

Emergency Veterans' Job Training Act (EVJTA)

The Veterans Administration (VA) is mailing letters to veterans who have previously applied for training under the EVJTA of 1983, but who have been unsuccessful in obtaining stable and permanent employment before their Certificate of Eligibility expired. The letter states that this past fall the president signed into law a bill that extends the EVJTA to July 1, 1986.

Veterans who have been unemployed for 15 of the 20 weeks before receipt of the letter are given the opportunity to apply for a new Certificate of Eligibility by receiving an application from their local Job Service office or regional VA office. They may also request professional VA counseling.

Qualified veterans who begin an approved program of job training by the July 1, 1986 date will have the benefit of the VA reimbursing their employer one-half of their starting wage, up to $10,000.

Arizona Unemployment Insurance Activities - October 1985

	October 1985	September 1985	October 1984	% Change From One Year Ago
Arizona Claimants Served*	26,016	35,300	21,848	+19.1%
Arizona Average Weeks Unemployed**	9.2	9.5	10.7	-14.0%
Arizona Benefits Paid*	$ 8,612,807	$ 9,200,438	$ 7,141,414	+20.6%
Arizona Trust Fund Balance	$317,443,521	$314,717,862	$236,849,244	+34.0%

*All Programs **UI Only

The Arizona Labor Force in November

The unemployment rate in Arizona remained at 6.5 percent for the third consecutive month in November. The continuing expansion of job opportunities in the service-producing sectors of the economy prevented unemployment from rising as it has during most of 1985. In the last 12 months, Arizona establishments have created over 54,000 jobs. The rate of employment growth is expected to slow next year, but no major recession is foreseen for the state's economy.

The regional economy as a whole may escape recession, but some industries have been plagued by significant layoffs already. The loss of 800 jobs in durable goods manufacturing marked the fourth month in a row that employment has dropped. This is of particular concern in light of the rapid growth of employment in the aerospace industry, a major component of the durable goods category. The machinery sector, which includes many producers of electronic equipment, lost 1,400 jobs in November. Employment in this category now stands at 66,800, about 5,000 below the peak level of seven months ago.

Another sector that has faltered recently is construction. Seven hundred jobs were lost in November. Some of the layoffs have been due to seasonal, weather-related factors, but there are signs of a decrease in the volume of homebuilding activity, and slower office construction also may be contributing to the decline in employment. The increase in the Pima County unemployment rate last month may be partially explained by the loss of 300 construction jobs.

In spite of the weakness displayed by the goods-producing sector in the second half of 1985, other areas of the economy appear to be prospering. Retailers throughout Arizona anticipated a strong holiday buying season by adding over 6,000 workers in November. The strength of the finance, insurance, and real estate (FIRE) category also was impressive, with 800 more people employed last month. The financial services sector now has grown by nearly 9 percent over the last twelve months, matching the increase recorded during the rapid expansion of 1984.

Most of the service industries posted employment gains in November. Northern Arizona was experiencing seasonal losses in hotels and lodging and related categories, but the decreases were somewhat less than expected. Seasonal hiring by hotel operators in central and southern Arizona generated a net increase of 200 jobs, while health services added 500 workers statewide. A contrary note was sounded by the business services sector. Employment in this category, which includes many temporary help agencies, fell by 600 in November.

As 1985 concludes, Arizona continues to rank among the fastest growing states in the nation. As unemployment rose and several industries experienced declining employment, other industries expanded and absorbed thousands of workers. It is a tribute to the strength and diversity of the regional economy that the unemployment rate has not increased more rapidly than it has. If the layoffs in the durable goods and construction industries continue, unemployment may climb upward again in the next few months. Even so, the Arizona economy should be strong enough to avoid a slump comparable to the recession of three years ago.

Brian Cary

Arizona Labor Force and Employment

November 1985 (in thousands)

	ARIZONA				
				-- Amt Change --	
	Nov.* 1985	Oct. 1985	Nov. 1984	Oct. to Nov.	1984 to 1985
TOTAL CIVILIAN LABOR FORCE**	1490.3	1474.6	1477.2	+15.7	+13.1
Total Unemployment	94.9	94.9	62.0	+0.0	+32.9
Rate	6.4	6.4	4.2	---	---
Rate (Sea. Adj.)***	6.5	6.5	4.3	---	---
Total Employment	1395.4	1379.7	1415.2	+15.7	-19.8

The Above Labor Force Statistics Should N

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	Nov.* 1985	Oct. 1985	Nov. 1984	Oct. to Nov.	1984 to 1985
TOTAL WAGE AND SALARY	1288.6	1280.2	1234.2	+8.4	+54.4
Manufacturing	182.5	183.2	178.5	-0.7	+4.0
Durable Goods	143.6	144.4	140.6	-0.8	+3.0
Stone, Clay and Glass	8.5	8.5	7.5	+0.0	+1.0
Primary and Fabricated Metals	16.5	16.5	17.1	+0.0	-0.6
Primary Metals	7.3	7.1	7.5	+0.2	-0.2
Fabricated Metals	9.2	9.4	9.6	-0.2	-0.4
Machinery	66.8	68.2	70.6	-1.4	-3.8
Other Durable Goods	51.8	51.2	45.4	+0.6	+6.4
Aircraft and Missiles	24.5	23.9	20.4	+0.6	+4.1
Lumber and Wood Products (Except Furniture)	8.1	7.9	7.3	+0.2	+0.8
All Other Durable Goods	19.2	19.4	17.7	-0.2	+1.5
Nondurable Goods	38.9	38.8	37.9	+0.1	+1.0
Food and Kindred Products	8.7	8.7	8.4	+0.0	+0.3
Apparel	5.1	5.1	5.1	+0.0	+0.0
Printing and Publishing	14.4	14.3	14.0	+0.1	+0.4
All Other Nondurable Goods	10.7	10.7	10.4	+0.0	+0.3
Mining and Quarrying	11.0	11.2	12.8	-0.2	-1.8
Copper Mining	8.4	8.5	9.9	-0.1	-1.5
Other Mining and Quarrying	2.6	2.7	2.9	-0.1	-0.3
Construction	109.0	109.7	103.6	-0.7	+5.4
Trans., Communications, and Public Utilities	64.0	63.5	62.1	+0.5	+1.9
Transportation	28.8	28.5	29.1	+0.3	-0.3
Communications and Public Utilities	35.2	35.0	33.0	+0.2	+2.2
Trade	314.7	308.1	301.5	+6.6	+13.2
Wholesale Trade	63.4	63.0	61.0	+0.4	+2.4
Retail Trade	251.3	245.1	240.5	+6.2	+10.8
General Merchandise and Apparel	41.8	39.4	41.7	+2.4	+0.1
Food Stores	37.9	37.1	36.8	+0.8	+1.1
Automotive and Service Stations	29.6	29.4	28.0	+0.2	+1.6
Eating and Drinking Places	88.7	87.2	82.2	+1.5	+6.5
Other Retail Trade	53.3	52.0	51.8	+1.3	+1.5
Finance, Insurance, and Real Estate	79.5	78.7	73.2	+0.8	+6.3
Services and Miscellaneous	300.1	299.6	283.5	+0.5	+16.6
Hotels and Other Lodging Places	31.7	31.5	29.3	+0.2	+2.4
Business Services	68.3	68.9	64.9	-0.6	+3.4
Health Services	72.5	72.0	69.6	+0.5	+2.9
Other Services	127.6	127.2	119.7	+0.4	+7.9
Government	227.8	226.2	219.0	+1.6	+8.8
Federal	41.5	43.3	39.7	-1.8	+1.8
State and Local	186.3	182.9	179.3	+3.4	+7.0
School	111.3	109.3	109.5	+2.0	+1.8

* Preliminary

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

NOTE--Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment

November 1985 (in thousands)

MARICOPA COUNTY					PIMA COUNTY				
			-- Amt Change --					-- Amt Change --	
Nov.* 1985	Oct. 1985	Nov. 1984	Oct. to Nov.	1984 to 1985	Nov.* 1985	Oct. 1985	Nov. 1984	Oct. to Nov.	1984 to 1985
947.3	937.2	939.6	+10.1	+7.7	271.3	266.9	267.2	+4.4	+4.1
48.0	47.8	30.0	+0.2	+18.0	15.2	14.4	10.6	+0.8	+4.6
5.1	5.1	3.2	---	---	5.6	5.4	4.0	---	---
5.1	5.1	3.2	---	---	5.7	5.4	4.0	---	---
899.3	889.4	909.6	+9.9	-10.3	256.1	252.5	256.6	+3.6	-0.5

Be Used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK									
845.9	840.5	808.4	+5.4	+37.5	234.5	232.2	221.8	+2.3	+12.7
130.0	131.1	129.8	-1.1	+0.2	32.5	32.2	29.7	+0.3	+2.8
103.6	104.6	103.8	-1.0	-0.2	27.3	27.0	24.6	+0.3	+2.7
5.2	5.2	4.6	+0.0	+0.6					
10.9	10.9	11.0	+0.0	-0.1					
53.0	54.2	56.8	-1.2	-3.8					
34.5	34.3	31.4	+0.2	+3.1					
26.4	26.5	26.0	-0.1	+0.4	5.2	5.2	5.1	+0.0	+0.1
5.2	5.4	5.4	-0.2	-0.2					
3.3	3.2	2.9	+0.1	+0.4					
10.5	10.4	10.3	+0.1	+0.2					
7.4	7.5	7.4	-0.1	+0.0					
0.6	0.6	0.6	+0.0	+0.0	2.3	2.4	2.8	-0.1	-0.5
75.7	75.9	71.6	-0.2	+4.1	21.1	21.4	19.4	-0.3	+1.7
42.3	41.9	40.7	+0.4	+1.6	8.7	8.7	8.8	+0.0	-0.1
19.7	19.5	19.8	+0.2	-0.1	4.0	4.0	4.0	+0.0	+0.0
22.6	22.4	20.9	+0.2	+1.7	4.7	4.7	4.8	+0.0	-0.1
215.2	209.6	205.7	+5.6	+9.5	51.0	50.6	49.5	+0.4	+1.5
50.0	49.7	48.5	+0.3	+1.5	7.6	7.6	6.9	+0.0	+0.7
165.2	159.9	157.2	+5.3	+8.0	43.4	43.0	42.6	+0.4	+0.8
26.8	24.8	26.4	+2.0	+0.4	7.5	7.3	8.2	+0.2	-0.7
24.3	23.7	23.6	+0.6	+0.7	5.9	5.9	5.9	+0.0	+0.0
18.9	18.9	17.8	+0.0	+1.1	4.8	4.6	4.4	+0.2	+0.4
57.7	56.3	53.0	+1.4	+4.7	16.4	16.3	15.3	+0.1	+1.1
37.5	36.2	36.4	+1.3	+1.1	8.8	8.9	8.8	-0.1	+0.0
62.5	61.7	57.1	+0.8	+5.4	10.9	10.8	10.3	+0.1	+0.6
203.4	203.3	193.7	+0.1	+9.7	57.5	57.0	52.1	+0.5	+5.4
19.2	18.8	18.1	+0.4	+1.1	5.0	4.9	4.5	+0.1	+0.5
55.3	56.0	53.4	-0.7	+1.9	10.3	10.2	9.0	+0.1	+1.3
47.9	47.5	47.6	+0.4	+0.3	15.8	15.7	13.8	+0.1	+2.0
81.0	81.0	74.6	+0.0	+6.4	26.4	26.2	24.8	+0.2	+1.6
116.2	116.4	109.2	-0.2	+7.0	50.5	49.1	49.2	+1.4	+1.3

-- Prepared by Labor Market Information, Research and Analysis (CPS, 1/85)

Nonmetropolitan Counties
Labor Force and Employment
November 1985

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL CIVILIAN LABOR FORCE*.	15,825	29,750	37,650	12,625	7,950	2,150	4,800
Total Unemployment	2,625	2,600	3,725	1,550	850	350	825
Rate	16.6%	8.7%	9.9%	12.3%	10.7%	16.3%	17.2%
Rate (Seas. Adj.)**. . . .	16.9%	8.7%	10.2%	12.3%	10.8%	16.2%	-INA-
Total Employment	13,200	27,150	33,925	11,075	7,100	1,800	3,975

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL WAGE AND SALARY. . . .	14,950	23,850	34,575	9,725	4,900	1,850	2,475
Manufacturing.	775	2,125	2,650	1,300	175	50	75
Mining and Quarrying	25	175	25	1,625	0	675	0
Construction	925	1,375	1,575	425	150	75	75
Trans., Comm., & Pub. Util..	2,025	1,575	2,450	325	175	50	50
Trade.	1,400	5,175	7,950	1,925	1,375	300	800
Fin., Insur., & Real Estate.	275	625	775	250	150	25	100
Services and Miscellaneous .	4,125	3,125	8,025	1,575	825	100	600
Government	5,350	9,675	11,125	2,300	2,050	575	775

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL CIVILIAN LABOR FORCE*.	24,450	25,800	32,250	9,025	33,325	36,025
Total Unemployment	2,675	3,675	3,800	1,575	2,100	5,250
Rate	10.9%	14.2%	11.8%	17.5%	6.3%	14.6%
Rate (Seas. Adj.)**. . . .	11.0%	15.0%	12.4%	16.2%	6.6%	-INA-
Total Employment	21,775	22,125	28,450	7,450	31,225	30,775

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL WAGE AND SALARY. . . .	18,150	18,800	26,275	8,100	20,350	24,250
Manufacturing.	2,400	1,825	3,625	1,100	2,200	1,675
Mining and Quarrying	300	1,100	3,600	0	575	50
Construction	1,500	900	1,100	325	1,950	1,875
Trans., Comm., & Pub. Util..	1,125	1,650	1,175	550	875	925
Trade.	5,175	3,425	4,750	3,150	5,250	7,825
Fin., Insur., & Real Estate.	875	350	700	250	800	950
Services and Miscellaneous .	3,475	4,850	2,775	1,200	4,075	4,450
Government	3,300	4,700	8,550	1,525	4,625	6,500

*Adjusted to the Current Population Survey (CPS) to reflect place of residence.
**Seasonal adjustment not applicable for economic assistance programs.

NOTE--Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment For Economic Assistance Programs November 1985

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,490,321	1,395,457	94,864	6.4%
Apache	15,816	13,186	2,630	16.6
Cochise	29,738	27,142	2,596	8.7
Coconino	37,644	33,924	3,720	9.9
Gila	12,629	11,076	1,553	12.3
Graham	7,957	7,105	852	10.7
Greenlee	2,146	1,794	352	16.4
La Paz	4,811	3,974	837	17.4
Maricopa	947,319	899,318	48,001	5.1
Mohave	24,463	21,788	2,675	10.9
Navajo	25,807	22,130	3,677	14.2
Pima	271,342	256,105	15,237	5.6
Pinal	32,249	28,447	3,802	11.8
Santa Cruz	9,024	7,447	1,577	17.5
Yavapai	33,337	31,228	2,109	6.3
Yuma	36,039	30,793	5,246	14.6

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators. Note: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Estimated Hours and Earnings of Production Workers in Selected Industries in Arizona November 1985

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVG. HOURLY EARNINGS		
	NOV.* 1985	OCT. 1985	NOV. 1984	NOV.* 1985	OCT. 1985	NOV. 1984	NOV.* 1985	OCT. 1985	NOV. 1984
FOR THE STATE OF ARIZONA*									
Manufacturing	399.56	391.20	375.25	40.4	40.0	40.7	9.89	9.78	9.22
Aircraft & Missiles	INA	INA	INA	INA	INA	INA	INA	INA	INA
Food & Kindred Products	374.26	328.32	292.16	41.4	38.0	38.8	9.04	8.64	7.53
Primary Metals	499.20	492.11	510.86	39.4	39.4	41.0	12.67	12.49	12.46
Machinery	360.59	360.30	320.80	39.8	39.9	40.1	9.06	9.03	8.00
Copper Mining	571.87	569.38	572.98	41.5	41.5	42.1	13.78	13.72	13.61
Construction	423.03	423.03	425.22	35.4	35.4	36.5	11.95	11.95	11.65
Utilities	573.03	573.03	598.98	42.7	42.7	44.8	13.42	13.42	13.37
Retail Trade**	237.40	243.62	236.38	32.7	33.1	35.6	7.26	7.36	6.64
Wholesale Trade	354.75	353.80	358.66	37.5	37.4	38.9	9.46	9.46	9.22

* Preliminary

** Excludes eating and drinking places.

NOTE--These estimates are based on a sample of full and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

--Prepared by Labor Market Information, Research and Analysis (1972 SIC, 1/84)

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New Developments

"New Developments" is featured each month as a service to employers and job seekers. It is a compilation of public announcements of the more significant new construction, grand openings, major hirings and layoffs, and other employer events that have special significance for Arizona labor markets. The announcements are paraphrased and otherwise edited from articles published in newspapers and other periodicals from throughout the state. "New Developments" are limited to space available, and no attempt is made to compile an exhaustive list of all such events that have occurred during the month.

CONSTRUCTION - Ground was broken in late November on the $24 million Mayo Clinic at 136th Street and Shea Boulevard in Scottsdale. One of only two Mayo clinics to be built outside Rochester, Minnesota, the Scottsdale facility is scheduled to open in spring 1987. This first of what will eventually be three triangular buildings will have three stories above ground and two below, consisting of approximately 164,000 square feet of space. Business will begin with a staff of 30 Mayo-trained physicians and between 80 and 100 support personnel hired from the metro Phoenix area. The ultimate plan for the clinic is to house 470 physicians, though Dr. Richard Hill, clinic CEO, says "You have to realize that could be 10, 20, 30 years from now. Putting 470 doctors down there is not going to happen overnight." Also speaking of the future, Mayo spokeswoman Tracey Torres says, "We want this to be a regional medical center for the Southwest. We want to draw people from a 300- to 500-mile radius." The Mayo Clinic, an outpatient institution offering specialized medical treatment in numerous areas, will utilize the north branch of Scottsdale Memorial Hospital for its inpatient needs.

El Mirage, a poor Phoenix farming community and a haven for migrant workers, will undergo a $600 million face-lift over the next five years. That will happen, in part, due to the efforts of former City Manager Gil Olguin, who himself calls the city of 6,300 a "pocket of poverty." The economic boom hinges on four projects:

El Mirage Village Square - This $250 million project will include a motor vehicle shopping mall; a city government center; a medical center, including a hospital; a vocational training center; apartments, restaurants, office buildings; a post office; a museum; and a day care center. To be built on 372 acres, Village Square is expected to generate 1,400 jobs.

Pueblo El Mirage R.V. Resort and Country Club - This $30 million project will be built on 320 acres and will include an 18-hole golf course, a 40,000 square-foot performing arts center, and 2,100 lots for recreational vehicles. The project is already 70 percent complete and is expected to generate more than 200 jobs.

Capistrano Estates - This is an $18 million residental development with an estimated 600 single-family homes and 1,125 multifamily units, such as townhouses and apartments. The first homes should be ready in spring 1986.

Sierra Grande Hotel and Resort - The $21.5 million project is to be built on 200 acres and will include another 18-hole golf course, tennis courts, a clubhouse, and restaurants. About 250 new jobs are expected to be generated.

Another poor farming community is in for a fancy face-lift. This time it's the community of Surprise, with 4,500 residents, where five residential-resort developments totaling more than $300 million are planned over the next five years. The focus is on the nearby retirement communities of Sun City, Sun City West, and Youngtown, and the projects include:

Brookview Country Club - A $100 million project to be built on 320 acres near 115th Avenue and Bell Road. It will include a 92-room Sheraton Hotel; an 18-hole golf course; an extended-care medical facility for elderly people; and about 675 units of condominiums, patio homes, and townhouses.

Sun Village Adult Resort Community - A $35 million, 335-acre resort style community intended for the older adult population.

Located at the southwestern corner of Grand Avenue and Litchfield Road, it promises 3,000 residential units, a nine-hole golf course, and a recreation center.

Happy Trails R.V. Resort - A $30 million, 320-acre project calling for more than 2,000 spaces for recreational vehicles, five swimming pools, six spas, and a nine-hole golf course.

Already completed are the Rose Garden Mobile Home, a $2 million, 386-space mobile home resort with clubhouse at the corner of Bell and 115th Avenue, and the Sunflower R.V. Resort, a $40 million development containing 1,107 recreational-vehicle spaces on 75 acres at the corner of Bell and El Mirage roads. No estimates were given on the number of jobs the total $300 million investment in Surprise will create.

Construction on a 124-suite Signature Resort and conference center began in the rugged Granite Dells area north of Prescott. It is the first full-service resort to be built in Prescott in several years. The four-story hotel will feature tennis, year-round swimming, hiking, nature trails, horseback riding, exercise and sauna facilities, stocked refrigerators and wet bars, cable TV, and telephones in all bathrooms. Meeting and banquet facilities will accommodate up to 400 persons. The all-suite hotel is scheduled to be completed next summer.

Ground was broken on a 480-acre master-planned lake community just west of 88th Avenue on Beardsley Road in Peoria. The project will consist of four lakes weaving through residential neighborhoods with home lot sites ranging from 4,000 to 10,000 square feet. The community will also include 25 acres of commercial land and 68 acres of multi-family housing. Amenities include a 6,000 square-foot clubhouse, racquetball and tennis facilities, a jacuzzi, sauna and steam rooms, and a putting green. Build-out is estimated in five years.

Ground was broken on the new Young Women's Christian Association (YWCA) complex at 755 East Willetta Street in Phoenix. The new quarters will be the first new community service building located in the Good Samaritan Redevelopment Area bounded by East McDowell Road, Seventh Street, the Papago Freeway, and 13th Street. The 32,000 square-foot complex will include a 60-bed residential center for women and youth, a senior citizens service center, a 35- by 75-foot outdoor heated swimming pool, and exercise and equipment rooms. The center is scheduled for completion in spring 1986.

A joint venture firm has been awarded a contract for a 1.3 million square-foot expansion program that will triple the size of the McDonnel Douglas Helicopter Company assembly and flight test center in Mesa. Employment at the 334-acre site is expected to grow from the present 2,500 to more than 5,000 by 1987.

Del E. Webb Construction Services Company has begun construction on a research and development facility valued at $4.5 million at the Arizona State University Research Park in Tempe. The 41,322 square-foot, three-story complex is designed to provide research and development tenants with total systems flexibility for water, air conditioning, electrical, and ceiling requirements. The structural steel construction will be covered with red brick and feature royal blue insulated reflective glass on the east and west exposures. The complex will offer parking for 166 vehicles, overlook one of the park's three lakes, and be located directly across from a proposed heliport, conference center, and hotel.

Santa Fe Pacific Realty announced plans to develop a 300-acre, master planned business park at 43rd Avenue and Indian School Road. The company expects to break ground on the first phase of the project during the first quarter of this year, according to Craig Koester, project coordinator. Approximately 4.7 million square feet will eventually be built on the total site, and the entire business park will take an estimated seven years to develop at a cost of $180 million. Initial building construction will include multi-tenant industrial and retail structures totaling 150,000 square feet. Phase one infrastructure construction will cost approximately $5 million and will be completed in late spring.

Construction has begun on the $3.5 million facility for Scottsdale Hyundai. It is one of the first 50 American dealerships selected to sell cars manufactured by South Korean automaker Hyundai Motor Company. The 30,000 square-foot facility will be located on a 2.5 acre site at 68th Street and McDowell Road. It is expected to open this spring and will employ approximately 50 people within the first year of operation.

After two years of assembling land, developer Wayne E. Barnes got Phoenix City Council approval to build a 16-story industrial midrise in the Seventh Street and Buckeye area. "The original proposal came as somewhat of a surprise; that's not a typical midrise location," said Rick Counts, city planning director. But after analyzing the plausible labor force, coupled with the possibility of attracting a major employer to the downtown area, officials stopped asking "why?" and started asking "why not?" The 16-story building will house assembly and manufacturing facilities on its lower floors; drafting, engineering, and clerical facilities on the middle levels; and executive offices on the top stories, Barnes said. "The Council took some pains to ensure it would not be office," said Counts. Seventh Street is viewed as a gateway into the city, and Barnes said the project area, bordered by Pima and Buckeye roads and Fourth Street to the west, will do away with scrapyards that have long been in place.

The area south of Sky Harbor Airport is quietly emerging as an office center as auto-salvage yards, cement-batch plants, and other heavy industry businesses are rapidly being targeted for conversion to midrise office parks that could rival developments in other parts of the city. However, city council's approval of three large projects this past fall prompted some to complain that the council is blindly creating new traffic problems and ignoring its new general-development plan. The projects are:

Southbank, a 235-acre project just north of 32nd Place and the Maricopa Freeway. This project was reported in the October Newsletter's "New Developments."

The Kaiser Center, a 38-acre project at the southeastern corner of 44th and Elwood streets. The Kaiser Development Company, developer of McCormick Ranch in Scottsdale, is planning to build 1.7 million square feet of office, research and development, hotel, and restaurant space in 13 buildings ranging from a single story to nine stories, or 110 feet.

An unnamed project by RGW Company, on 26 acres at the southwestern corner of 48th Street and University Drive. About 6,075,000 square feet of office space is planned for five buildings ranging from five to eight stories, or 107 feet maximum, as well as a 10-story hotel and two restaurants.

In addition, last June the council approved The Cotton Center, a 285-acre office, industrial park, and residential development on the University of Arizona's former experimental farm at the southwest corner of 48th Street and Broadway Road.

Altogether, nearly 4.5 million square feet of new office space is planned for the area. For comparison, the Camelback Corridor office market, bordered by 16th and 70th streets, Lincoln Drive, and Campbell Avenue, has about 4.5 million square feet of office space, according to a recent study by Patrick Properties, Incorporated.

Construction has begun on Westcourt in the Buttes, a $31 million, 300-room conference resort to be built on a 25-acre site at 48th Street and Broadway. The resort's design will accentuate the surrounding rock formations, natural desert, and mountain landscape. The east butte will serve as a backdrop for the resort's lobby and registration area. A vaulted clear skylight will extend directly over the registration counter into the butte. As a result, the butte will extend inside the building, accented by waterfalls and cacti. "To our knowledge, we will be the only resort in the country with part of a mountain physically located in its main lobby," says Fred Cox, president of Westcox Hotel Company. A 180-seat, freestanding circular restaurant and lounge situated atop one of the three buttes will also provide views, featuring

270 degrees of glass fascia. The resort is scheduled to open in December.

A Santa Ana, California plastics firm announced plans in mid-November for the construction of a 35,000 square-foot manufacturing plant at the Kingman Airport Industrial Park in Mohave County. Gable Plastics, Incorporated is a manufacturer of ABS and PVC pipe and conduit with annual sales of about $7 million in 1984. The firm bought seven acres as the site for a plant the officials said initially will employ 32 people.

Another firm, one that promises to employ about 40 people, was given preliminary approval in mid-November to issue $10 million in Industrial Development Authority bonds. Northern Indiana Brass Company, a manufacturer of brass, copper, and plastic plumbing fittings, said they will begin construction early this year on a manufacturing plant that Kingman has been anticipating since 1982.

A $100 million expansion of retail, office, and hotel space in the 20-year-old Scottsdale Fashion Square was unanimously approved in mid-December by the city council. Plans call for the expansion of the approximately 40-acre open mall at the northwestern corner of Scottsdale and Camelback roads to include a six-story, 186-room hotel, and a doubling of retail space to about 724,000 square feet.

VACANT PLANT LEASED - A South Korean hat manufacturing company, Young An Hat Company of Seoul, has signed a lease with the Hopi Tribe to use a long-vacant plant in the tribe's industrial park in Winslow. The Bureau of Indian Affairs, which balked at approving an earlier lease agreement with the firm, has had a change of heart after looking at the whole problem. The Interior Department had also objected initially because they felt the rental fee was too low. However, the Hopis argued that the rental fees were in line for Winslow and that the vacant plant is costing the tribe $100,000 a year to maintain. The plant is expected to provide up to 400 jobs for Winslow area residents, with a "Hopi preference" in hiring. "The council and I are pleased that we will soon have a firm utilizing the facility because it will save many dollars that have been spent in upkeep for a vacant facility and it will additionally provide jobs for the Hopi people," said Tribal Chairman Ivan Sidney.

LAYOFFS - The Pointe Resorts, for the past decade a strong example of corporate expansion in Phoenix, is tightening its belt. In a surprise move in mid-November, Pointe Resorts began laying off 150 administrative and maintenance staff. The move raised eyebrows in the business community, because it came in the midst of the hotel giant's continuing expansion into South Phoenix and San Diego. "The move is temporary and in response to the marketplace," said Ray Artigue, vice president of communications for Point Resorts. "It is a matter of supply and demand. The supply of rooms in the valley is simply outstripping demand." Artigue said those that have been "asked to take sabbaticals" until the Pointe South Mountain opens include accounting, advertising, public relations, and maintenance personnel. The company decided to direct the cuts at administrative rather than service workers to preserve the quality of hospitality afforded guests.

General Mills announced in mid-November that it is closing its four Good Earth Restaurant and Bakery outlets in the Valley, but hopes to reopen them as part of another General Mills restaurant chain this year. "The restaurants were not really performing. Although we are still excited about the concept and the product, the bottom line is that there have not been enough people that have been excited, and it has not met our expectations," said Jon Sleik, general manager of the company's Good Earth and Olive Garden chains. He estimated that each of the four Valley restaurants employs 50 to 80 people. An employee at the Mesa restaurant, who asked not to be identified, said she feels "very positive" despite the restaurant's closing. "You can look for us reopening with a new concept in February."

Arizona Labor Market Newsletter
LABOR MARKET INFORMATION PUBLICATIONS
Site Code 733A
P.O. Box 6123
Phoenix, Arizona 85005

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2/18/86 S0465-1

ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. X No. 2
February 1986

Unemployment Rate

Seasonally Adjusted
December*

ARIZONA	6.5%
Maricopa Co.	5.2%
Pima Co.	5.6%
UNITED STATES	6.9%

Consumer Price Index

National-December
1967 - Base Year

Wage Earner/Clerical Worker -	323.4
% Chg. Yr. Ago	3.6
All Urban -	327.4
% Chg. Yr. Ago	3.8

Phoenix-4th Qtr.
1977 - Base Year

All Urban -	191.5
% Chg. Yr. Ago	3.9

Producer Price Index

National-December*
1967 - Base Year

All Commodities	310.2
% Chg. Yr. Ago	0.1
Finished Goods	297.2
% Chg. Yr. Ago	1.8

* Preliminary

Comparable Worth: The Road to Pay Equity?

This issue of the Newsletter will feature two articles on comparable worth. The first, "Some Opinions and the Minnesota Experience," is a "pro" article written by Nancy Augustin, editor of this Newsletter. It focuses on the Pay Equity Conference which was held in Phoenix last November.

The second article, "An Economist and a Feminist Look at Comparable Worth," is a "con" article written by Dr. Sharon Bernstein Megdal, an assistant professor of economics at the University of Arizona (U of A), who is currently filling a governor-appointed term on the Arizona Corporation Commission. She is joined by Sheila Tobias, an active feminist and a visiting scholar in political science at the U of A.

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Arizona Labor Market Information Newsletter
WINNER OF THE ICESA 1985 LMI PUBLICATION AWARD

Nancy Augustin, editor
Processed by RA Clerical Support Unit

Arizona Department of Economic Security

Pay Equity: Some Opinions and the Minnesota Experience

Most people would agree that a woman working in the same firm as a given man; doing a job which requires equal skill, effort, and responsibility; and performing under similar working conditions, should be paid the same wage as the man. In 1963, Congress passed the Equal Pay Act to ensure that this would be the case. How did this act come about? Certainly, paying women less than men for "equal" work had been acknowledged and recognized for a mostly-male legislative body to put such a law on the books. The question is, though, how effective has it been?

Most interpretations of the U.S. law, in effect, require that two jobs have equal scores on each of the compensable factors of skill, effort, responsibility, and working conditions to be considered equal under the law. Therefore, the Equal Pay Act only applies in those situations where sex-based discrimination is blatantly obvious. It is much less flexible than a related law in Canada which considers two jobs equal under the law if the composite of the scores on the four factors is equal. Since Canada adopted this law in spring 1978, employees in the federal government and publicly-chartered industries, in effect, have a "comparable worth" or "pay equity" system determining their wages. In Australia, where minimum wages are set for most organizations by state and federal wage boards, the Federal Tribunal adopted a policy of equal pay for work of equal value in 1975.

Here in the U.S., however, 16 years after passage of the Equal Pay Act, the accepted slogan "equal pay for equal work" has not yet evolved into the more progressive and realistic "equal pay for work of equal value." In fact, the latter slogan--the watchwords of comparable worth or pay equity advocates--is considered by many men and women in the U.S. as a left-wing, radical idea. Even the Reagan Administration felt the need to flippantly disregard comparable worth as "the looniest idea since looney tunes." Another question then, is: why such a high-pitched reaction?

In an attempt to answer some of these questions, the Phoenix Women's Commission sponsored a Pay Equity Conference on November 13, 1985. Anything but a forum on "left-wing" ideas, the conference featured three compensation experts, one economist, and the director of Women's Studies at Arizona State University (ASU) as speakers.

The purpose of this article is to select from the four hours of speeches, presentations, and questions, the essence of what was said. A great deal of information has been condensed; information that led the conference speakers to vote four-to-one in favor of comparable worth. The clear consensus was that "equal pay for work of equal value" to employers is the only sensible way to go.

Why? Dr. Nancy Felipe Russo, director of Women's Studies at ASU, pointed out that "it's good business for employers to be sensitive about how their female employees feel about their jobs, in part because every other worker in the workplace is a woman. Women are beginning to feel that their wages are low because they are in occupations filled mostly by women."

She emphasized that pay equity is the goal of eliminating sex-based discrimination in the workplace; that the purpose of the conference was to examine what strategies are available--comparable worth being only one of them.

In looking at the "trend" of women moving into the workplace, she said, "This is not so much the case as that they did not move out of it. Women do not drop out of the workforce like they used to." She added, "While women are moving slowly into traditionally male-dominated jobs, they are moving into traditionally female-dominated jobs at a much faster pace. Occupations have been and, to a large extent, will continue to be highly segregated by sex. We must look into why female-dominated positions pay less."

She also talked about the feminization of poverty, saying "This is why we care. Women are poor. Part of the reason for this is that they make less money than men. Even with similar qualifications, they do not have a man's salary when they work. And when you are poor, it follows you throughout your life."

She mentioned the rationalization process. "People like to be fair. 'If something is happening, it must be right. Women must deserve to be paid less since they are being paid less. People also say 'pay equity will cost billions of dollars!' This is not good enough. We want to know who it will cost and how much.

She ended her opening remarks with some thoughts on the baby boom generation. "More jobs were created due to them, and now there will be high demand for people to fill these jobs as baby boomers retire, etc. Employers will not any longer be able to treat women and minorities in a cavalier fashion."

These remarks were followed by a presentation by Nina Rothchild, commissioner of employee relations for the state of Minnesota. She is responsible for the administration of the state Civil Service System, as well as for labor relations, and played a key role in implementing the comparable worth plan for state employees that was in place as of 1983.

Before discussing how pay equity works in practice, she spoke a little about the politics. "It is strange that although there are already some existing pay equity systems, there are still people who say 'if pay equity happens, then this will happen.' The political issue is, how do you deal with the politics of change? Because what we are doing is basically changing the way people perceive the value of work and how people are paid. You must keep in mind that we were analyzing the structure of the pay system, that we were not doing individual comparisons. Also, keep in mind that most of the 'con' arguments are hypothetical--if...then. Take it from a practitioner, most others disagree in 'principle.'"

She said she hears over and over, how do you compare apples and oranges? "In fact, you can compare apples and oranges a number of ways. All you have to look for are common characteristics or elements that different kinds of food have to some extent--weight, number of calories, number of carbohydrates, protein, etc. Basically, job evaluation is the same thing. You look at jobs and identify characteristics that are common to all jobs, present to a greater or lesser extent, whether it be a governor of a state or a custodian cleaning a building."

Minnesota has a job evaluation system that was developed by Pay Associates, a management consulting firm which has been doing this for 30 or 40 years. Rothchild pointed out that there is nothing new or complex about the concept behind job evaluation--"it has been around for about 50 years." Pay Associates used the Hay System of common characteristics for the Minnesota pay system. They are:

1. Know-how: "Which is a word they use for the knowledge and skills required for the job."

2. Problem Solving: "How routine is the job; does the job require figuring out what to do in order to solve a problem."

3. Accountability: "In many ways, asks how many things go wrong if you mess up; the results, the impact of the work. For example, if you are a custodian and forget to empty a wastebasket, it is not that big a deal. But if you are a fiscal analyst at the Department of Revenue and you miscalculate your tax receipts by $10 million, that has a substantial impact on the state's budget."

4. Working Conditions: e.g., the comfort and safety of the workplace.

Rothchild added that this is a simplified version of the subfactors, that you need to be well trained, follow certain procedures, use guide charts, and so on. She also reminded the group that "You are not evaluating individuals--you are looking at the functions of the job. You take the job description or the plan specifications for the Civil Service System, and you look at the functions of that job in relation to guide charts, and you see what level it is; e.g., how much know-how does a given job require? You do that for each of the factors, add them up, and what you end up with is a number that, in a way, measures the 'size' of the job. We live in a society where we think in terms of levels of work, and in many ways we pay on the basis that we assume in this society that some people get paid more than others. Jobs that require more knowledge, problem solving, accountability, and adverse working conditions should pay higher than those which add up to a lesser number of points. In general, this should be the case."

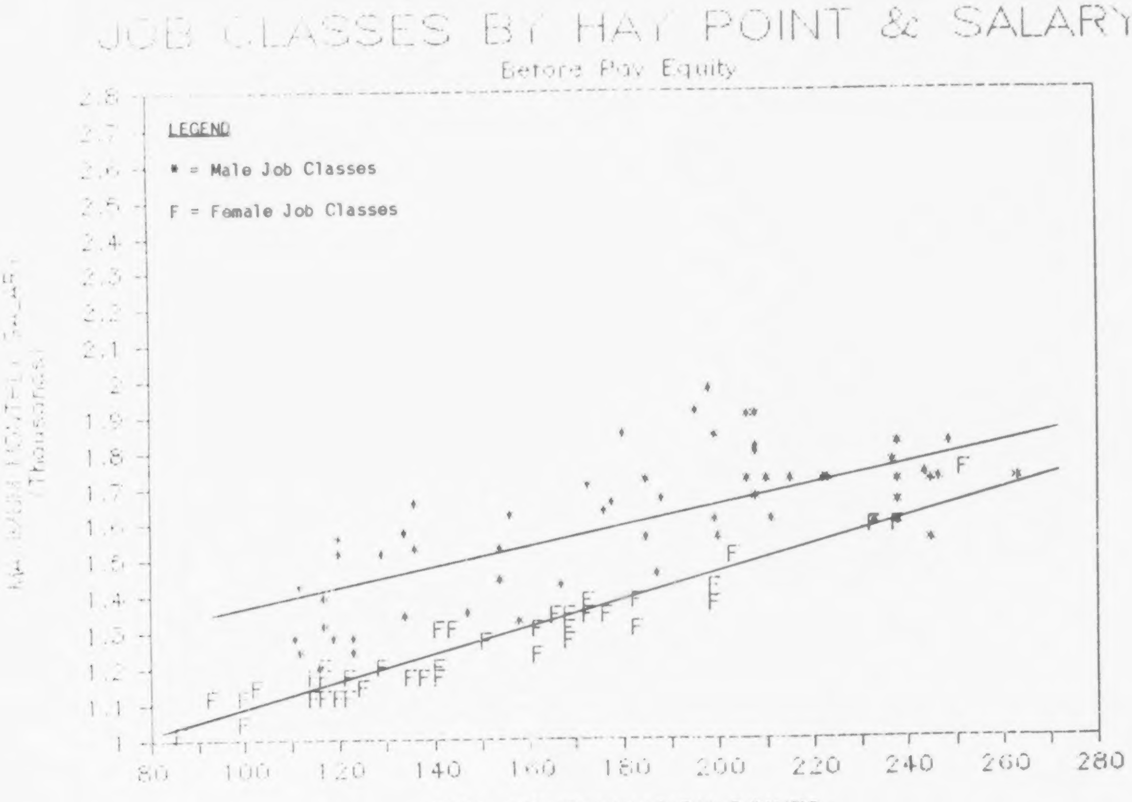


Figure 1

Speaking of the pre-comparable worth days of their pay system, "What was so compelling for us when we looked at the state of Minnesota, which has 35,000 state employees and about 1,600 different job classes, was that we found that the jobs were heavily segregated by sex. Only about 15 percent of our job classes are sex integrated. The identified job classes were either male job classes or female job classes, simply by the people who work in those classes. We found that absolutely, consistently, without exception, that the job classes where females were most of the workers were paid less than their points would indicate."

Now she went to the graph to illustrate Minnesota's pay practices in 1981. (See Figure 1.) "For every job title you have two numbers, (1) one which gives the measure of "value" of the job, and (2) one which is your current pay practice for that job. If you plot the values that you get by Hay points against the wages, you would expect them to go up in value as you go up in wages. Let us look at the male-dominated positions. As you go up in points, you do, in fact, go up in pay. White males in our society have typically not suffered the kinds of discrimination that 30 years ago was legal." She pointed out, "We were not using the Hay System to set wages, but were using it to analyze the structure of our pay system. The general pattern is that as you go up in Hay points, you go up in the pay structure. It is not a one-to-one relationship, but a general tendency. You could draw a line of central tendency through the points and say, 'This is how we pay people when we look at the nature of the work in general.' Now, some classes are paid more than the general pattern and some paid less, but there are other factors that affect wages and that is OK.

"Now let us look at female-dominated positions. In every case (Clerk I, Secretary I, Hospital Aide, etc.), they pay less than equivalently valued male jobs. Again, there is the same general pattern that as the position goes up in point value, it goes up in wages. But not the same way men's positions do. It does not scatter around the non-discriminatory salary practice of men. It, in fact, forms a separate and lower line of its own. In other words, the work that women do--if there are mostly women doing that job--this is how we pay it. And, if it is mostly men doing the job, this is how we pay it. Essentially, what we have in our society is a double standard of wages, a dual wage structure."

Rothchild challenged others to simply look at the structures of their pay systems using job evaluation as an analytical tool to look at what their current pay practices are. "I would guess that almost everyone would discover this double standard--this dual wage structure."

She reminded the audience to remember that "this is really in many ways an abstraction because we are not looking at individuals. We are looking at job classes (Clerk I, Secretary I, Hospital Aide, etc.), which are typically female classes. It has nothing to do with the people in the job. Also, the number we use for salary is not actual salary, but we use the top of the range. So you allow for other factors like seniority and so forth, because people move through the range for that work. So you abstracted the individual characteristics and are looking in many ways at the structure of the pay system as reflected in the work itself, and the amount of money you would be willing to pay regardless of who the incumbents are, rather than looking at males' work and females' work."

Rothchild spoke about the problem with the solution perhaps being the fact that it is so "simple minded." She said, "What you ought to do is pay people enough so that they are up where they belong. Pay people as though they had never been discriminated against. So the solution to pay equity (or comparable worth) is basically to figure out some mechanism to eliminate the dual wage structure that is based on sex and pay these people in female-dominated positions as if men did that work. For example, this is a Clerk Typist III. If men were Clerk Typist IIIs, what would we pay them? We would pay them up here. And that is essentially what we did in the state of Minnesota.

"We have now completed the process, and we found that paying each of these people who work in these female-dominated classes (and about 10 percent of them were men) was $26 million. That sounds like a lot of money, but it is less than 4 percent of our state's payroll. We did this analysis in 1981 and 1982 and we decided since it was 4 percent of payroll, we will do it over a four-year period of time. So we established in law a mechanism by which the legislature could earmark funds for special equity increases and, by July 1, 1986 the female-dominated line at the bottom has merged with the male-dominated line above. (See Figure 2.) So what we will have done in effect by July 1, 1986 is to merge the dual wage structure upward, so that now we will pay people according to the work they do rather than through some accident of biology.

"Keep in mind, though, that there is not a one-to-one relationship between Hay values and wages. I keep going back to the argument where people say 'job evaluation is not perfect--you can not really measure jobs.' You do not need to have it perfect. What you are doing is analyzing the struc-

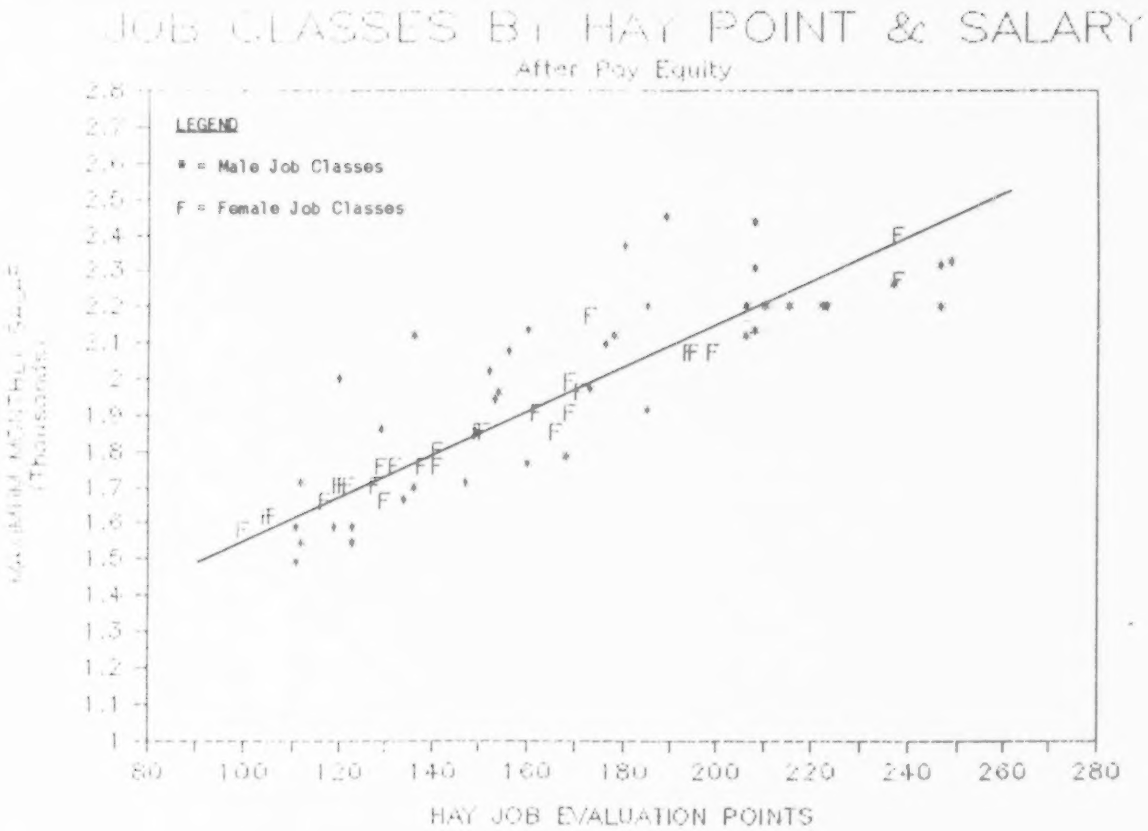


Figure 2

ture of your system and integrating the pay structures--the double standard of wages that you have. So you would expect a certain amount of scatter around the salary practice line--whether there be some politically powerful position or a situation where there has been a short supply, such as computer technology jobs. But it will be a scatter around a single line instead of two lines."

Rothchild noted that the cost, in fact, ended up to be 3.7 percent of payroll and "not surprisingly, the increases went primarily to all of our clerical workers and about half of our health care workers. About 150 different job classes and about 9,000 of our employees were eligible for equity increases." She also spoke about how, since that went so well in 1984, their state legislature passed a law which applies to local units of government. With over half of these local governments reporting in, it was clear that the 1 to 5 percent of payroll cost was the inclusive range.

Ending her discussion of the practical side of the issue, she said, "I do not want to sound like Pollyanna, but the technical side is really quite simple. Obviously, though, local officials are not crazy about this. On the other hand, it is very heartwarming to me to see the fundamental decency that I at least find in the upper part of the prairie. I have not been to Arizona before. I hope you have the same kind of decency here--that once people analyze the structures of the pay systems, they say, 'Hey, that is not right--we should have done this a long time ago!' So, even though it costs money, I think in many ways pay equity is simply catching up to the realities of today's world, which are: women are in the labor force, they are there because they need the work and the money--and our pay system simply has not caught up to where the world is now."

Finishing up by saying, "There are ways to do it. People have done it. It is easy to do if you have goodwill and want to do it," Rothchild switched over to the political side of the issue, where she had begun. "I would like to look into the kinds of traps that people can fall into and the kinds of things that opponents are likely to bring up or do. Think of the book Passages, the idea that people go through different stages when they start dealing with pay equity. That is not to say the sequence is invariant, but there does seem to be some very identifiable and predictable stages. These are:

The Chicken Little Stage

"These basically are the people who say if you try to implement comparable worth, all these terrible things are going to happen. I guess we could also call this the 'looney tune' stage because this is generally the stage that is characteristic of the Wall Street Journal, Fortune Magazine, the Reagan Administration, chambers of commerce, etc.

"First of all, before getting into the three code words people in this stage are likely to use, they also have two other words--'complex' and 'controversial'--when the concept is simple and it should not be controversial to pay people according to the work they do. Then, when they get into the details about why it's complex and controversial, they use the words:

1. Apples and oranges;

2. Market--this is supposed to be supply and demand; and

3. Cost.

"Well, we have already talked about the apples and oranges. The supply and demand is interesting because when they use the word market, they do not distinguish between prevailing wages and supply and demand. And if you work in a personnel system as I do, and you look at the number of openings and the number of applicants, there is very little relationship between the number of applicants--people willing to do the job--and the wages of the job. Very little. Only in a few exceptional circumstances do you find a direct supply and demand type of factor with wages. So, confusing prevailing wage rates--which have all the discriminatory practices of the past 200 years of history built into them--with supply and demand, simply does not make sense if you really look at it. Not to say it does not count in some cases, but to try to explain with supply and demand is not very perceptive.

"The third code word is 'cost.' But, as I have said, anyone who has actually made an analysis of their workforce found the cost somewhere between 1 and 5 percent of payroll. This is not an unmanageable amount if you can plan for it, control it, and do it over a period of time as we did in Minnesota.

The Ostrich Stage

"There are the people who came to the conclusion that there might be something to this comparable worth, and maybe other people have problems, other people might discriminate, but we do not have any problems here. Large corporations are likely to fit into this category, and you will hear things like, 'Women make less money because they have babies.' Now, this is an interesting reason why women make less money.

"There are also the people that are likely to buy into what we call 'Let them be plumbers,' the answer now is affirmative action. It is fascinating to watch some of the folks in Washington who are so anti-affirmative action. Yet, they all say the problems with women's wages can all be solved by having women go into men's jobs--which overlooks the economy in the most obvious way--that the growth of the economy is in the service sector, the information society, and in office work. So the growth in the economy is in women's jobs. The decline in the economy is with blue-collar jobs--that is where the unemployment rate is high.

"Besides, who would fill the vacant women's jobs? Can you imagine any man in his right mind quitting his $25,000/year job, going to typing school so he can take a woman's job that pays $15,000/year? It just does not make sense, and it would take 10 million men to do that. So my view is that we are going to have to integrate our pay systems so that we have a single wage structure.

The Nitpicker Stage

"Some people go here directly, they forget about the Chicken Little Stage. Academics tend to go here too. These are the people who can find a million complexities on the pay equity issue, and they can find the one example that illustrates the supply and demand argument. And they talk about 'no job evaluation system is absolutely perfect,' which is absolutely true. There is no way you can take a job and put a tape measure around it. But you can measure it in a very rough kind of way. You do not need a perfect system in order to analyze the structure of your wage system. You do want to have a relatively unbiased evaluation system if that is what you use, but you do not need a microscope to find an elephant--which basically is what wage discrimination is.

"So, these are the people who get really hung up on the difficulty and complexity and try to spend a lot of time reinventing the personnel system and making it so much more complicated until the whole thing kind of collapses of its own weight.

"I think there are some people in the Nitpicker Stage who are likely to stay there out of their own self-interest. There is big grant money for studying something like pay equity and, therefore, if you make it real complex and difficult, you can attract some government grants.

The Crossroads Stage

"This is the stage where people are really forced to deal with the issue of comparable worth in some kind of real sense. This is the way it was with local officials in Minnesota. Whether they started out as Chicken Little or Ostrich, etc., what it came down to was they had to do something because the law said they had to do something--like report to the legislature on their pay equity plan.

"Let me end up by talking a little about the Crossroads Stage. There you have to realize that there is a right way and a wrong way. The right way leads you to the Emerald City. The wrong way leads you to turmoil, lawsuits, and strikes. Certainly, the quickest way to go downhill real fast is to talk about freezing or lowering men's wages! Now, remember what you are trying to do is to establish a non-discriminatory wage system. When women earned the right to vote, they did not talk about taking the vote away from men. You do not take away the non-discriminatory thing. What you do is take the group who have been discriminated against and treat them the way people who have not been discriminated against are treated.

"Doing a study and finding a double standard of wages and not doing anything about it is sure enough another way that leads to turmoil, lawsuits, and strikes.

"A final wrong way is starting from scratch and reinventing your entire personnel system. You are disrupting everything that people have gotten used to. Whether or not they like it, they are at least used to it."

As far as the right way to pursue comparable worth is concerned, "There is no guarantee that you can reach the Emerald City, but at least from what I have seen with local units of government in Minnesota and the other states in this country that have instituted a pay equity plan, there seem to be some common characteristics there too.

"Look at it as a win-win situation. For the employer, it is just much more sensible to pay people according to what they do, to pay a decent wage that all employees perceive as fair. To the employee, it is an obvious win because they are getting paid a decent wage for the work that they do.

"Also, keep your pay system simple. Do not let all the exceptions drive the system. If you have got a market factor--a supply and demand factor--allow that within your overall framework. But look at the overall structure and keep it as simple as possible.

"Get to the problem before it gets to you. Use common sense. Determine the size of the problem and then determine how you are going to address it. One of the things that led us to be successful in Minnesota at the state level was that it was a fully cooperative, voluntary effort. We were never filed suit against.

"Again, by keeping it simple and focusing on the positive side of it, these things are helpful, whether you use Minnesota's model of job evaluation or go some other way in looking at that double standard of wages. The bottom line is that you sit down with the parties involved and realize that it's going to be a political process involving compromise and accommodations between competing interests. But you end up saying, 'Look, let us figure something out and then let us just go ahead and do it!' And that is exactly what we did in Minnesota."

Three speakers followed Nina Rothchild. The first was Marvin Dertein, manager of compensation and benefits for the Salt River Project and director of research for their job evaluation methodology. He was another "pro" comparable worth advocate, and his main points were:

1. Job evaluation plans are used to set wages 70 to 80 percent of the time. (Wage survey are only used for 20 to 30 percent of wage determination.)

2. The EEOC-commissioned National Academy of Science found that among the different job evaluation plans being used in the U.S., there can be up to a 55 percent error rate leading to job bias against women.

3. Due to this essentially "moral" problem, employers have as one main responsibility to see to it that their job evaluation plans are sex-neutral. The methodology for achieving this is a very simple statistical test.

The last two speakers at the conference engaged in a debate on the pros and cons of comparable worth. Dr. Finis Welch, chairman of the U.S. Commission on Civic Rights Advisory Committee on the Economic Status of Women and Minorities, and professor of economics at UCLA, took the "con" point of view. He pointed out, through some examples, that making women's work more expensive will lead to less employment for women, since firms would not be willing to increase their costs of production without a corresponding increase in productivity.

In speaking to the point that job evaluations value jobs and not the individuals in them, he said, "I would hate to think that the value of an artist was independent of who the artist happened to be. Because I know a lot of economists, I would also think the value of the economist depends on who the economist is."

Mr. E. James Brennan, president of Brennan-Thomsen Associates of St. Louis, a compensation management consulting firm, took the "pro" point of view, and some of his comments dealt with the kind of "double-think" he encounters when first dealing with a company's management--how afraid they are of the idea of a comparable worth pay plan. One example of double-think, upon first encountering a CEO:

CEO: "We treat everyone equally!"
Mr. Brennan: "But wait a minute; you have two separate pay plans that break out according to sex categories."
CEO: "Well, that is so we can match the market."

It is unfortunate to have to be succinct when so much worthwhile was said. As mentioned at the outset, four of the five speakers were for comparable worth, and any of them could have had their presentations expanded upon for a "pro" comparable worth article. In any case, the Pay Equity Conference not only answered many questions, but raised some new ones as well. One of these was: where do comparable worth advocates go from here?

Something most everyone agreed on is that one way to benefit comparable worth is to hold more of the same type of open forums. While dispelling myths, breaking down barriers, and at the same time hearing what the opponents have to say, such pay equity conferences can hardly help but to further the achievement of the goal of equal pay for work of equal value to employers.

Nancy Augustin

1986-87 Annual Planning Information Publication Now Available

The latest edition of the Annual Planning Information (API) publication is now available. This report contains projections for 1986 and 1987 of population, labor force, persons in poverty, persons with work disabilities, and high school dropouts. Current data on public assistance recipients, average weekly wages, teenage parents, veterans, offenders, Unemployment Insurance recipients, and Vocational Rehabilitation clients are also included in the publication.

Many of the tables are presented with breakdowns by age, sex, race, and Hispanic ethnicity. All of this information is arranged for the state as a whole and by either county or by Job Training Partnership Act (JTPA) service delivery area. Some data is included for the cities of Phoenix and Tucson.

The API can be used for program planning and evaluation, economic analysis and development, resource allocation and funding, job search assistance, job development, and vocational counseling. Available on request are supplements to the API concerning unskilled workers concentration and growing/declining industries and occupations. If you would like a copy of the API, please write to the address on the back of this Newsletter or call (602) 255-3871.

Barbara Keene

Military Career Guide Available

The Military Career Guide contains descriptions of 134 enlisted military occupations and is designed to be used by students for career exploration purposes. The Guide provides composite, joint-service occupational information rather than service-specific data. The Guide is designed to replace the Military-Civilian Occupational Source Book. The Guide also includes information regarding the aptitudes needed for entry into each military occupation. Students who have taken the Armed Services Vocational Aptitude Battery (ASVAB) can use their scores to determine their chances of qualifying for these military occupations. The Guide contains DOT indexes to facilitate its use with civilian career information sources.

Single copies may be obtained free of charge by calling or writing: U.S. Military Enlistment Processing Command, 2500 Green Bay Road, North Chicago, Illinois, 60064-3094, phone: 1-800-323-0513.

Arizona Unemployment Insurance Activities - November 1985

	November 1985	October 1985	November 1984	% Change From One Year Ago
Arizona Claimants Served*	23,217	26,016	22,155	+4.8%
Arizona Average Weeks Unemployed**	9.1	9.2	8.7	+4.6%
Arizona Benefits Paid*	$7,470,014	$8,612,807	7,274,043	+2.7%
Arizona Trust Fund Balance	$332,981,234	$317,443,521	$242,875,074	+37.1%

*All Programs
**UI Only

The Arizona Labor Force in December

For the last four months, the statewide unemployment rate has held constant at 6.5 percent. Although 36,300 new jobs have been created during that period, rapid population growth has caused unemployment to rise by 2,800. Our civilian labor force now exceeds the one and a half million mark for the first time and is expected to continue rising in the year ahead as our population grows. But with job growth predicted to be less than in 1985, the unemployment rate can be expected to begin rising again.

Looking back over 1985, the state's economy peaked at mid-year and has held that level for nearly six months. Manufacturing, mining, and construction have been suffering job losses to varying degrees, a trend expected to continue into 1986. In manufacturing, losses in electronics have been offset almost completely by gains in defense-related aerospace. But considering that the Gramm-Rudman-Hollings bill will cut domestic and defense spending equally, cutbacks in defense purchases have the potential for reducing aerospace employment. Elsewhere in manufacturing, seasonal employment gains in apparel and food processing have helped many of the state's southern rural counties to enjoy a short term of economic growth.

In construction, the pace of job losses quickened in December. After losing 800 jobs in November, an additional 1,400 jobs were lost in December. It is unclear at this point how much of that loss can be attributed to delays related to the holiday season. Although the January statistics may show a slight rebound, the underlying economic factors continue to point downward. A high and rising vacancy rate in commercial buildings and multi-family housing is expected to curtail new starts. If it were not for falling interest rates, a growing population, and low vacancy rates in single-family housing, construction employment would fall even more in 1986.

Finally, in the state's battered copper mining industry, 1985 continued the string of losses that began in 1981. While employment levels held steady in December, a total of 1,700 people have lost their job in the last 12 months. This nearly 17 percent loss is not the end. Recent announcements indicate that another 300-350 people will be losing their jobs; and with little likelihood that prices or demand will change positively, more losses can be expected.

While there is clearly a concern over growth in 1986, some sectors of the economy remain strong. In particular the retail trade, service, and finance/real estate industries continue to do well as the state's population grows. A good Christmas holiday season added 5,400 retail trade jobs and 1,300 service jobs. The opening of several new food stores, hiring at department stores around the state, and a growing base of winter tourists all helped to expand employment. And the outlook for these industries continues to be positive into 1986.

In the last 12 months, the state's economy has created an impressive 54,400 jobs, making Arizona one of the fastest growing states in the nation. But this growth has been and continues to be uneven across the state. In the Phoenix metropolitan area, where nearly 65 percent of the jobs exist, over 70 percent of the new jobs in 1985 were created. And in the Tucson metropolitan area, they have 18 percent of all the jobs in the state, but over 20 percent of the new jobs last year. So although the state's rural counties did grow by 4,900 jobs last year, they continue to grow slower than would otherwise be the case.

As we look back across 1985 and into 1986, it is clear that 1985 was a good, but not spectacular, year for the economy. Rapid population growth has moved our unemployment rate up nearly to the national level. Along with an expected slowdown in job creation led by construction and manufacturing, the unemployment rate will continue to rise in 1986. The economic expansion which began nationally nearly three years ago has matured and a slowdown is inevitable. While the national slowdown will definitely impact on Arizona, no precipitous drops are expected.

Dan Anderson

Arizona Labor Force and Employment

December 1985 (in thousands)

	ARIZONA				
				-- Amt Change --	
	Dec.* 1985	Nov. 1985	Dec. 1984	Nov. to Dec.	1984 to 1985
TOTAL CIVILIAN LABOR FORCE**	1500.1	1493.0	1490.5	+7.1	+9.6
Total Unemployment	95.4	95.6	64.1	-0.2	+31.3
Rate	6.4	6.4	4.3	---	---
Rate (Sea. Adj.)***	6.5	6.5	4.4	---	---
Total Employment	1404.7	1397.4	1426.4	+7.3	-21.7

The Above Labor Force Statistics Should Not Be

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	Dec.* 1985	Nov. 1985	Dec. 1984	Nov. to Dec.	1984 to 1985
TOTAL WAGE AND SALARY	1297.7	1290.8	1244.2	+6.9	+53.5
Manufacturing	183.0	182.5	180.8	+0.5	+2.2
Durable Goods	143.8	143.7	142.8	+0.1	+1.0
Stone, Clay and Glass	8.4	8.4	8.0	+0.0	+0.4
Primary and Fabricated Metals	16.5	16.5	17.6	+0.0	-1.1
Primary Metals	7.3	7.3	7.5	+0.0	-0.2
Fabricated Metals	9.2	9.2	10.1	+0.0	-0.9
Machinery	66.6	66.9	71.2	-0.3	-4.6
Other Durable Goods	52.3	51.9	46.0	+0.4	+6.3
Aircraft and Missiles	25.0	24.6	20.3	+0.4	+4.7
Lumber and Wood Products (Except Furniture)	8.0	8.1	7.4	-0.1	+0.6
All Other Durable Goods	19.3	19.2	18.3	+0.1	+1.0
Nondurable Goods	39.2	38.8	38.0	+0.4	+1.2
Food and Kindred Products	8.7	8.6	8.6	+0.1	+0.1
Apparel	5.1	5.0	5.2	+0.1	-0.1
Printing and Publishing	14.5	14.4	13.9	+0.1	+0.6
All Other Nondurable Goods	10.9	10.8	10.3	+0.1	+0.6
Mining and Quarrying	11.0	11.0	12.0	+0.0	-1.0
Copper Mining	8.4	8.4	9.2	+0.0	-0.8
Other Mining and Quarrying	2.6	2.6	2.8	+0.0	-0.2
Construction	107.5	108.9	101.4	-1.4	+6.1
Trans., Communications, and Public Utilities	64.7	64.0	61.4	+0.7	+3.3
Transportation	29.8	28.8	28.4	+1.0	+1.4
Communications and Public Utilities	34.9	35.2	33.0	-0.3	+1.9
Trade	322.3	316.3	307.9	+6.0	+14.4
Wholesale Trade	63.9	63.3	60.4	+0.6	+3.5
Retail Trade	258.4	253.0	247.5	+5.4	+10.9
General Merchandise and Apparel	45.3	42.7	46.0	+2.6	-0.7
Food Stores	39.4	38.5	37.6	+0.9	+1.8
Automotive and Service Stations	29.5	29.7	28.2	-0.2	+1.3
Eating and Drinking Places	89.9	88.6	83.7	+1.3	+6.2
Other Retail Trade	54.3	53.5	52.0	+0.8	+2.3
Finance, Insurance, and Real Estate	79.9	79.5	75.2	+0.4	+4.7
Services and Miscellaneous	302.0	300.7	282.8	+1.3	+19.2
Hotels and Other Lodging Places	31.6	31.7	28.6	-0.1	+3.0
Business Services	68.7	68.4	64.7	+0.3	+4.0
Health Services	73.1	72.6	69.6	+0.5	+3.5
Other Services	128.6	128.0	119.9	+0.6	+8.7
Government	227.3	227.9	222.7	-0.6	+4.6
Federal	41.1	41.5	39.4	-0.4	+1.7
State and Local	186.2	186.4	183.3	-0.2	+2.9
School	111.8	111.3	113.8	+0.5	-2.0

* Preliminary

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

NOTE--Prepared in cooperation with the U.S. Department of Labor,Bureau of Labor Statistics.

Arizona Labor Force and Employment

December 1985 (in thousands)

MARICOPA COUNTY					PIMA COUNTY				
			-- Amt Change --					-- Amt Change --	
Dec.* 1985	Nov. 1985	Dec. 1984	Nov. to Dec.	1984 to 1985	Dec.* 1985	Nov. 1985	Dec. 1984	Nov. to Dec.	1984 to 1985
954.2	948.7	948.0	+5.5	+6.2	273.4	272.3	272.0	+1.1	+1.4
48.4	48.4	31.3	+0.0	+17.1	14.9	15.3	10.8	-0.4	+4.1
5.1	5.1	3.3	---	---	5.4	5.6	4.0	---	---
5.2	5.2	3.4	---	---	5.6	5.7	4.1	---	---
905.8	900.3	916.7	+5.5	-10.9	258.5	257.0	261.2	+1.5	-2.7

sed for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

852.3	847.1	815.7	+5.2	+36.6	236.7	235.4	226.4	+1.3	+10.3
130.4	130.0	131.4	+0.4	-1.0	32.7	32.5	30.2	+0.2	+2.5
103.7	103.6	105.4	+0.1	-1.7	27.5	27.3	25.2	+0.2	+2.3
5.2	5.2	5.0	+0.0	+0.2					
10.9	10.9	11.2	+0.0	-0.3					
52.9	53.0	57.3	-0.1	-4.4					
34.7	34.5	31.9	+0.2	+2.8					
26.7	26.4	26.0	+0.3	+0.7	5.2	5.2	5.0	+0.0	+0.2
5.3	5.2	5.5	+0.1	-0.2					
3.2	3.2	3.1	+0.0	+0.1					
10.6	10.5	10.2	+0.1	+0.4					
7.6	7.5	7.2	+0.1	+0.4					
0.6	0.6	0.7	+0.0	-0.1	2.2	2.3	2.8	-0.1	-0.6
74.5	75.6	70.5	-1.1	+4.0	21.2	21.1	19.3	+0.1	+1.9
43.1	42.3	39.9	+0.8	+3.2	8.8	8.7	9.1	+0.1	-0.3
20.5	19.8	19.2	+0.7	+1.3	4.1	4.0	4.1	+0.1	+0.0
22.6	22.5	20.7	+0.1	+1.9	4.7	4.7	5.0	+0.0	-0.3
220.4	216.2	209.8	+4.2	+10.6	52.0	51.5	50.9	+0.5	+1.1
50.2	49.9	47.6	+0.3	+2.6	7.5	7.5	7.1	+0.0	+0.4
170.2	166.3	162.2	+3.9	+8.0	44.5	44.0	43.8	+0.5	+0.7
29.0	27.3	29.5	+1.7	-0.5	8.2	7.9	8.5	+0.3	-0.3
25.5	24.9	24.3	+0.6	+1.2	6.1	5.9	6.0	+0.2	+0.1
18.8	18.9	17.9	-0.1	+0.9	4.7	4.8	4.5	-0.1	+0.2
58.8	57.7	54.5	+1.1	+4.3	16.5	16.4	15.6	+0.1	+0.9
38.1	37.5	36.0	+0.6	+2.1	9.0	9.0	9.2	+0.0	-0.2
62.8	62.4	58.9	+0.4	+3.9	11.0	11.0	10.5	+0.0	+0.5
205.2	203.8	193.1	+1.4	+12.1	57.9	57.7	52.4	+0.2	+5.5
19.5	19.2	17.2	+0.3	+2.3	4.9	5.0	4.7	-0.1	+0.2
55.7	55.3	53.1	+0.4	+2.6	10.4	10.4	9.0	+0.0	+1.4
48.3	47.9	47.2	+0.4	+1.1	15.9	15.8	14.0	+0.1	+1.9
81.7	81.4	75.6	+0.3	+6.1	26.7	26.5	24.7	+0.2	+2.0
115.3	116.2	111.4	-0.9	+3.9	50.9	50.6	51.2	+0.3	-0.3

-- Prepared by Labor Market Information, Research and Analysis (CPS, 1/85)

Nonmetropolitan Counties
Labor Force and Employment
December 1985

	Apache	Cochise	Coconino	Gila	Graham	Green-lee	La Paz
TOTAL CIVILIAN LABOR FORCE*.	15,900	29,850	37,800	12,700	8,125	2,075	4,800
Total Unemployment	2,925	2,650	4,275	1,625	900	275	850
Rate	18.4%	8.9%	11.3%	12.8%	11.1%	13.3%	17.7%
Rate (Seas. Adj.)**. . . .	18.9%	8.8%	11.1%	12.2%	11.5%	13.9%	-INA-
Total Employment	12,975	27,200	33,525	11,075	7,225	1,800	3,950

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Apache	Cochise	Coconino	Gila	Graham	Green-lee	La Paz
TOTAL WAGE AND SALARY. . . .	14,675	23,900	34,175	9,750	4,975	1,800	2,450
Manufacturing.	800	2,125	2,625	1,275	175	25	75
Mining and Quarrying	25	175	25	1,625	0	650	0
Construction	875	1,250	1,475	375	150	75	75
Trans., Comm., & Pub. Util..	1,850	1,600	2,350	350	175	50	50
Trade.	1,400	5,350	7,975	1,950	1,400	300	825
Fin., Insur., & Real Estate.	300	625	750	250	150	25	100
Services and Miscellaneous .	4,100	3,125	7,950	1,600	825	100	575
Government	5,325	9,650	11,025	2,325	2,100	575	750

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL CIVILIAN LABOR FORCE*.	24,200	25,825	32,800	9,000	33,600	35,800
Total Unemployment	2,700	3,975	3,950	1,175	2,325	4,475
Rate	11.2%	15.4%	12.0%	13.1%	6.9%	12.5%
Rate (Seas. Adj.)**. . . .	11.1%	15.6%	12.5%	13.8%	6.8%	-INA-
Total Employment	21,500	21,850	28,850	7,825	31,275	31,325

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL WAGE AND SALARY. . . .	18,000	18,525	26,700	8,550	20,450	24,825
Manufacturing.	2,325	1,750	3,625	1,100	2,200	1,775
Mining and Quarrying	300	1,100	3,625	0	575	50
Construction	1,500	800	1,125	325	1,900	1,875
Trans., Comm., & Pub. Util..	1,150	1,650	1,200	600	900	950
Trade.	5,200	3,400	4,925	3,575	5,325	8,275
Fin., Insur., & Real Estate.	850	350	700	250	775	950
Services and Miscellaneous .	3,375	4,775	2,825	1,200	4,075	4,475
Government	3,300	4,700	8,675	1,500	4,700	6,475

*Adjusted to the Current Population Survey (CPS) to reflect place of residence.
**Seasonal adjustment not applicable for economic assistance programs.

NOTE--Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment For Economic Assistance Programs
December 1985

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,500,060	1,404,738	95,322	6.4%
Apache	15,909	12,977	2,932	18.4
Cochise	29,836	27,197	2,639	8.8
Coconino	37,789	33,523	4,266	11.3
Gila	12,690	11,072	1,618	12.8
Graham	8,132	7,231	901	11.1
Greenlee	2,080	1,793	287	13.8
La Paz	4,808	3,963	845	17.6
Maricopa	954,197	905,872	48,325	5.1
Mohave	24,207	21,519	2,688	11.1
Navajo	25,821	21,853	3,968	15.4
Pima	273,395	258,460	14,935	5.5
Pinal	32,788	28,833	3,955	12.1
Santa Cruz	8,997	7,813	1,184	13.2
Yavapai	33,606	31,292	2,314	6.9
Yuma	35,805	31,340	4,465	12.5

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators. Note: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Estimated Hours and Earnings of Production Workers in Selected Industries in Arizona
December 1985

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVG. HOURLY EARNINGS		
	DEC.* 1985	NOV. 1985	DEC. 1984	DEC.* 1985	NOV. 1985	DEC. 1984	DEC.* 1985	NOV. 1985	DEC. 1984
FOR THE STATE OF ARIZONA*									
Manufacturing	395.28	398.75	377.81	40.5	40.4	40.8	9.76	9.87	9.26
Aircraft & Missiles	INA	INA	INA	INA	INA	INA	INA	INA	INA
Food & Kindred Products	334.93	375.42	294.84	38.9	41.3	40.5	8.61	9.09	7.28
Primary Metals	519.79	499.20	528.35	39.8	39.4	41.8	13.06	12.67	12.64
Machinery	371.57	354.88	333.66	40.3	39.3	40.2	9.22	9.03	8.30
Copper Mining	581.86	571.87	564.56	41.8	41.5	42.1	13.92	13.78	13.41
Construction	409.86	419.14	405.68	34.5	35.4	33.5	11.88	11.84	12.11
Utilities	598.84	593.01	598.98	44.0	43.7	44.8	13.61	13.57	13.37
Retail Trade**	237.10	236.88	228.74	33.3	32.9	34.5	7.12	7.20	6.63
Wholesale Trade	360.38	360.75	359.29	37.0	37.5	38.8	9.74	9.62	9.26

* Preliminary
** Excludes eating and drinking places.
NOTE--These estimates are based on a sample of full and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

--Prepared by Labor Market Information, Research and Analysis (1972 SIC, 1/84)

An Economist and a Feminist Look at Comparable Worth

Mention comparable worth to an economic conservative and it's a "frontal attack on economic liberty, the feminist road to socialism." Mention it to a NOW activist and it's the New Theology: the only true route to pay equity for women. Phyllis Schlafly has launched a campaign directed at blue-collar workers warning that comparable worth advocates "have targeted YOU for a wage freeze." George Will crows at the recent 9th Circuit Court ruling (overturning an earlier 1983 decision) that the state of Washington need not implement comparable worth. For him, it is a triumph for conservatism; an issue liberals of both sexes would be wise, he says, to dodge.

With passions so high, a rigidity is setting in that obscures, on the one hand, reasonable discussion of the imperfections of a free market where women's wages are concerned; and, on the other hand, the likelihood that comparable worth, if implemented, might substitute one set of arbitrary job evaluations for another.

Worse yet, both sides are losing sight of the fact that comparable worth is but one strategy among several. If recent court setbacks represent a watershed for the doctrine, they by no means relieve us of finding other ways to correct inequities in job pricing. As conservatives and feminists dig in, the real losers may be women whose wages do deserve to be raised.

In this article, the authors take a hard look at comparable worth in the light of recent developments and conclude that the benefits may not--even for women--be worth the dislocations and the costs. Also, they believe there may be sounder ways to advance pay equity for women without abandoning the market.

Twenty-five years ago, a woman entering the work force faced occupational exclusions, direct discrimination, and generally unequal pay, even for the same work. The index of occupational segregation by sex, maintained since 1916, showed that in occupations dominated by at least 70 percent of one sex, little had changed in the entire period in which such data had been logged. A woman graduating from college in 1960 could, whatever her talent and ambition, look forward to a career as a research or backroom assistant with no chance of promotion to traditionally male positions. And if she did manage to move up, she was assured of unequal pay. The only employer who always did pay the same for the same position was the military.

Female school teachers commonly experienced wage discrimination vis-a-vis males. Moreover, every teacher lived with a contract clause that required her to resign in the fifth month of pregnancy, thus losing her health benefits as well as her job.

The 1963 Equal Pay Act and Title VII of the 1964 Civil Rights Act (extended to professionals and public sector employees in 1972) made much of this employment discrimination illegal. But two problems remain. First is the continuing segregation of jobs and occupations by sex. Second, there remains an overall wage gap between men and women. Women on the average (that is, across all occupations) still earn 64 cents for every man's dollar. Advocates of comparable worth say this is the result of the artificially lower value of "women's work."

If implemented, comparable worth would mean that predominantly women's work would be re-valued, presumably upward, to allow for the assignment of better pay. (Men's wages, it is assumed, would not be lowered but would remain either the same or rise more slowly.) The procedure would consist of revising the "job evaluation" criteria that are generally used within large organizations to assign "points" and comparative values to different jobs.

Traditionally, wage theory has been the business of economists while job evaluation and pricing within the firms is done by compensation specialists. Whether people, men or women, should be paid the same if some quasi-scientific measure (job evaluation) determines their jobs to be "equal" raises some fundamental issues about wages that are not yet popularly understood. How is pay determined in the American economy? Are the methods used to set wages in large organizations useful and fair?

There is no question that women are crowded into many female-dominated occupations and that their positions tend, on the average, to be lower-paid than men's. But is this the result of intentional discrimination or "statistical discrimination"--judging all women by the work-related behaviors of some? Or, are we simply witness to the tried and true forces of supply and demand? In truth, it is a question no one, either activist or scholar, has been able to resolve with any certainty.

Some economists spend entire careers trying to establish the existence, or absence, of discrimination in the work place. The fact is, no one knows for sure just how much of the wage differential experienced by women workers is the result of discrimination and how much is a matter of their self-image, role socialization or, as economists say, their "taste" for work that is low paid.

The underlying issue is job worth.

When economists use the term "worth" in the context of hiring decisions, they have in mind the value of adding one more worker in terms of the contribution that person will make to the revenues of the firm. In theory, an additional worker will be hired so long as value of his or her "marginal product," that is, the additional contribution of that worker to output, will be no lower than his or her wage.

Basic to these calculations is the economist's presumption that employers and employees behave rationally and that people freely seek to maximize their economic well-being. It simply doesn't make economic sense for an employer to hire someone at a wage above the value of his marginal product because it would eventually bankrupt the firm. Similarly, an employee won't work for less than the wage he could earn elsewhere, if he had the option.

To the working person, however, that marginal product is distant and indistinct. How many workers, unless they are in sales, can point to the achievements of a single eight-hour day in terms of specific additional production, efficiency, or profit? People think of their job worth far more in terms of the skills, effort, and responsibilities entailed; i.e. job content. But these characteristics tell nothing about the dollar value to the firm of one's employment.

Thus, there is a fundamental difference in perception about job worth. The job holder focuses on some intrinsic value of the job; the employer on its contribution to profit. And on this difference in perception rests much of the passion aroused by the comparable worth debate.

In a free labor market, how does an employer know that any particular wage is correct? In theory, job pricing is a variant of the interaction of supply and demand. At a certain wage (the "market-clearing" wage), the supply of workers willing to work will equal the demand for their labor. In actuality, the process is usually by trial and error. If the wage is set too high, there will be a surplus of people willing to work. And that surplus will bring the wage down to equilibrium. If the wage is too low, the employer will not be able to find enough workers and will, eventually, have to raise the wage. The market, it is argued, works to sort out the individual decisions of millions of workers and employers to arrive at wages for different occupations. And it is this sorting out that reflects the true worth of any job.

One of the several exceptions to this neat model is the fact that most people make their occupational decisions once or, at most, twice in their lifetimes. Thus, a sudden change in labor supply or demand may not be within their ability to exploit. Another is that wages for alternative jobs and occupations affect labor supply. If women had as many occupational options as men, they might be able to sell their labor at a higher price by keeping the supply (of secretaries, for example) low.

According to recent research, there are 140 occupations that are predominantly male, 90 predominantly female, and 32 that are not particularly sex-segregated. That is, of 262 occupations, only 32 ar integrated by gender. Why are women clustered or, as economist Barbara Bergman puts it, "crowded" into the smaller number of occupations, thus causing a skew in their wages?

Before anyone assumes sex discrimination, this question must be answered. For all we know, there might be what economists call non-pecuniary compensations in the jobs in which women concentrate: working conditions, availability of on-site child care, distance from home, easy entry and exit, rather than discrimination. But if the clustering is involuntary--if women want jobs that are closed to them--the free market is not working and women incur the cost.

How do we distinguish between outcomes that result from free choice and those that result from discrimination? Economists can only look at statistical outcomes. Workers are divided into two non-overlapping pools. When women are unable to enter certain occupations, they crowd into those still open. Crowding results in lower wages in the open occupations and higher wages in those which exclude them. Why? Because the supply of wage-earners is being artificially increased in one labor pool and decreased in the other.

Thus, when an occupation becomes predominantly female, it may also become low-wage. Bank telling and computer programming are two examples of recently feminized occupations where average wages went down. These declines may also be the result of entry barriers elsewhere in the economy. Women's willingness to work at low wages, then, may be a consequence not of their "taste," as the free market economist would argue, but of their lack of options elsewhere. Sex segregation, crowding, and direct discrimination affect both the supply of women and the demand for them, cutting wage-earning possibilities at both ends.

One solution--one proponents of comparable worth recommend--is not to wait until traditions die out and discrimination ceases to affect wages but rather to adopt corrective measures now. Such efforts would involve the reassessment of tasks in the workplace according neither to supply and demand nor to marginal productivity, but to intrinsic factors in the job. These might include the education required, experience, routine vs. non-routine, and so on. These are the elements in the "worth" of a job that employees perceive as being most significant. And these are the elements measured on a formal job evaluation.

Job Evaluation

Job evaluation is a systematic means of creating a heirarchy of positions within a firm by assigning point values to each job category.

Comparable worth advocates have mixed feelings about job evaluation. On one hand, they feel current job evaluation systems are at the heart of the problem, for it is here that sex bias intrudes. A tree-trimmer is valued more than a library assistant, educational requirements notwithstanding, because someone arbitrarily assigns more points for working out-of-doors. (This is the obverse of Phyllis Schlafly's opposition to comparable worth. She asserts that in current job evaluation schemes there is a ceiling on the points assigned to risk in blue-collar work which gives a boon to white collar compared to physical labor.) So, if comparable worth were ever implemented, it would have to use some new version of job evaluation.

What, after all, is to guarantee that any new job pricing system, even one that is designed to promote women's skills, would not in time slide back into the old patterns? This is the heart of the comparable worth dilemma: to achieve pay equity, the promoters of comparable worth have to rely on a process that they now find unacceptable.

In most organizations, job evaluation involves four steps (the last of which many supporters of comparable worth would disallow). First, the organization decides which jobs are to be included in the hierarchy: Clerical? Professional? Managerial? All jobs? Second, it chooses and weights a set of "compensable factors" such as routine/non-routine, skill, experience, working conditions, number of subordinates, and so on. Once these steps are taken, the organization evaluates all jobs based on job descriptions and a breakdown of job components. This is called "job analysis."

The fourth step--the one that gives comparable worth advocates the most trouble--calls for a wage and salary survey of key jobs in the relevant job market. Most organizations, in short, are willing to order and rank the jobs according to intrinsic values; but when it comes to pricing, that is, assigning a particular salary or wage, the firm looks to the market. So, labor supply and demand are never far from the job pricing process, even when a formal evaluation scheme is in place.

Not all comparable worth revisions would omit the wage and salary survey; but in a recent settlement involving employees of Fresno, California, advocates of comparable worth demanded that the wage and salary survey not be included in the revised job evaluations on which pay equity adjustments would be based. Looking to the market, they said, would only bias the job pricing in favor of men's work all over again.

So there are three issues in contention. First, that points be calculated with an eye toward removing sex bias. Second, that when different jobs total up equal points, equal pay be forthcoming (even though this is presumably not required under the Equal Pay Act). And third, that job evaluation be done internally with little or no attention to existing wage rates.

Implementation

What happens when a series of female-dominated occupations are re-valued upward owing to new standards in job evaluation? We take a librarian's assistant who has previously been paid $6.00/ hour. Because her job is newly classified as equal to a male tree-trimmer, she now has the right to earn $8.00/hour.

Prior to the revision, say, 50 women were working in this job category. Thus, as the city calculated its labor costs, their salaries totaled $300/hour. To maintain that figure at $8.00/hour, the city will only be able to hire 37 library assistants.

But see what happens. Given supply and demand forces, a pay rate of $8.00/hour brings more people of both sexes into the market. Now, say, 75 people want to be library assistants where only 37 can be hired. So, not only is there a surplus of willing labor at the new wage rate, the employer is unwilling to hire as many as before. Services, with 37 library assistants instead of 50, will be curtailed. The city could maintain the library staff at 50 by raising taxes, thereby lowering the money citizens have available to spend on other goods and services. Or, if pre-existing tax levels and the library staff are maintained, parks and recreation may suffer. With the implementation of comparable worth, then, some individuals will be better off, some not.

So far we are considering only the immediate impact of comparable worth policies for a single job, occupation, or firm. Today, those who advocate comparable worth are not calling for nationwide legislation. (Rosemary Oakar's bill in Congress is to study the implementation of comparable worth only among federal employees.) But comparable worth would have still more impact if implemented across many jobs and occupations.

Wage realignment would, in time, affect the occupational choices made by young people. Under these circumstances women might be encouraged to stay or enter predominantly female occupations instead of entering men's fields.

Along with these concerns is the question of who will, finally, pay for these higher wages? The private employer is most likely to pass on his increased labor costs to the consumer; governments may raise taxes. There is nothing inherently wrong or un-American about making wage adjustments to correct for market distortions such as discrimination. (We add to consumer costs all the time by environmental regulation.) The question is whether the nation wishes to improve women's economic status in this way.

Alternatives

Let's return to the twin set of problems that are observable: occupational segregation by sex and generally lower wages for women's jobs. Is comparable worth the only or even the best strategy for attacking these root causes of pay inequity? Perhaps a more precise formulation of the problem can point out some alternatives.

1. Barriers to Entry

At a large, Connecticut-based insurance company some years ago, women and men were sex-segregated into two types of job categories. Men took phone calls, and, checking their premium table, gave information to would-be customers over the phone. Woman answered letters of inquiry and conveyed the same level of information by means of a typewritten response. The women, called "raters," were paid at the time $2,000 less than the men, called "underwriters." Had the positions not been sex-segregated there might well have been a considerable supply of women willing to become underwriters, eventually bringing the wage of underwriters down and raters up. But there was no free market; women could not become underwriters. Instead, women experienced a form of direct discrimination called "barriers to entry."

In another institution, male janitors were assigned "heavy housekeeping" which meant they pushed vaccuum cleaners and waxing machines. Women did "light housekeeping"; they washed and scrubbed with hand-held cloths. Again, there was an artificial segregation with a premium paid for heavy housekeeping, though no bona fide occupational qualification could be drawn for keeping women off the cleaning machines.

The comparable worth solution to these problems would be to examine the job components of the underwriters' and raters' occupations; reevaluate the degree of skill and/or effort involved in using cleaning machines; and revise raters' and light housekeepers' pay upward.

But is it really necessary to tangle with job components to rectify these situations? Today it is illegal to show preference in hiring men over women; to promote men at a faster rate than equally productive women; to set certain positions aside for men without a bona fide occupational qualification. Title VII, effectively implemented, would see the integration of the two pairs of occupations. (And this is precisely what was done in the early 1970s soon after these particular anomalies were brought to light.)

2. Crowding

The lessening of occupational segregation by sex would by itself do much to diminish the crowding of women in the labor market. But if crowding is what skews women's labor supply, then it can be attacked directly, without comparable worth. Efforts to attract women into mathematics and skilled technical fields currently dominated by men is one step in that process. Consciousness raising about the dead-endedness of some women's occupations is another.

3. Equal Pay and Title VII Legislation

Proponents of comparable worth believe that equal pay and anti-discrimination legislation have not done enough. But given the time frame, we conclude that perhaps the 1963 Equal Pay Act and the 1964 Civil Rights Act (only extended to professionals and the public sector in 1972), have not been given enough time. After all, it has been but a decade and a half that most women have been protected by both statutes. It takes time and practice for employers to learn that they can no longer discriminate against women. Instead of artificially mandating revised pay schedules, perhaps people should concentrate on closing whatever loopholes remain in these landmark laws.

4. Job Evaluation--Out of the Closet

The focus on job evaluation by comparable worth advocates has certainly been salutary. Millions of American workers are classified and paid through systems they are not privy to. Every worker in a large organization using job evaluation should request to see the scorecard for his or her position and insist on knowing the criteria by which the relevant "compensable factors" are weighed. Some employees who know how extra points are earned (for confidentiality, say, or supervision) can manipulate their job descriptions to get themselves higher point counts. Other people can not and ought to know what it is about their jobs that is holding them back.

Nor are the schemes in place as precise as some might contend. Many job evaluators will say, off the record, that, in the end, they calculate the points backward. They figure what they are going to have to pay to get a worker in a particular slot, and then organize the point count to fit the salary.

5. Job Assignments

Numerous studies of economic discrimination have pointed out that job assignments are a key factor in women's lesser earnings. If a women is made "coordinator" where a man would be promoted to "director," the problem is not in the "compensable factors" allocated to directing over coordinating. The problem is in the job assignment and job titling process. If we focus on wage anomalies, we may remove the pressure that supervisors should otherwise feel to make unbiased job assignments and titles. This would, in the end, affect women's upward mobility as well.

6. Scope-of-Practice Legislation

So far we have been looking at the evaluation of women's and men's jobs within large organizations--the focus of the comparable worth debate. But there are millions of women in free-standing occupations whose wages are limited by state law. It is state governments, through their scope-of-practice statutes, that effectively put a lid on the amount of money a nurse practitioner, a dental hygienist, or a legal assistant can make--because it is within state statutes and regulations that the rules of their occupations are written. A hygienist commonly cannot clean or treat a client's teeth unless there is a dentist on the premises. Nurses usually cannot prescribe medication without a physician's signature. Legal assistants cannot file papers in court on their own. In many states, psychologists cannot collect insurance payments unless an M.D. signs the forms, and so on.

Since these are fields in which professional women are disproportionately represented, public pressure to revise scope-of-practice rules, within the limits of consumer safety, would do a great deal to raise wages of women in these occupations.

Other policies that would affect both occupational segregation and women's wages would involve improved day care and financial aid to allow women to go back to school and train for better jobs.

Conclusion

Even without comparable worth adjustments, wages are improving for individual women although the aggregate seems immovable today. Women are gaining access to and prominence in occupations that were once closed to them, and where women are in positions of authority and have control over hiring decisions, we find many more women being employed and promoted. Girls have different role models from their mothers. Working women are responding to wage signals. And there is considerable integration of women into the more technical fields, at least at entry level.

There comes a time, perhaps more than once, in every woman's work life when she must decide whether she wants to accept lower pay, lobby for more money in her current position, or seek another job--even another occupation.

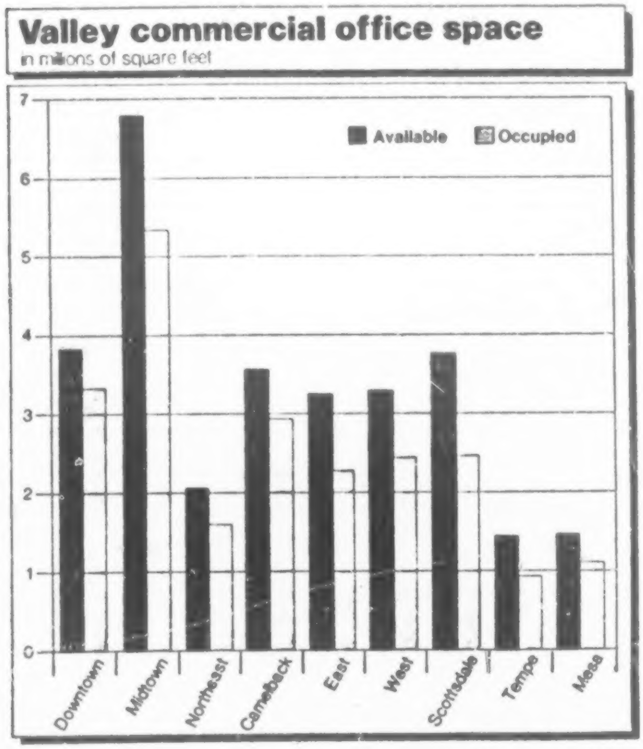
Whether comparable worth would be a cure for sex discrimination or just a palliative to keep women in place is something comparable worth advocates do not always consider. The market is cold and impersonal, but it is where the action is, and will remain. Perhaps, instead of lobbying for comparable worth, women should go where the money is.

Sharon Bernstein Megdal
Sheila Tobias

Editor's Note: Sharon Berstein Megdal would like to thank the University of Arizona Karl Eller Center for the Study of the Private Market Economy for research support.

New Developments

CONSTRUCTION - More than 5.4 million square feet of office space was added to the Valley in 1985 and an additional 7.3 million square feet is under construction in 100 buildings, according to a survey by Del E. Webb Realty and Management Company. However, leasing activity was also very high, with the Valley absorbing 2.83 million square feet of office space in 1985, a 7 percent increase over the 2.64 million square feet absorbed in 1984. Due to the record increase in supply, though, vacancy rates rose to 24 percent in 1985 from the previous year's 20 percent, the survey said.



The Arizona Republic, January 5, 1986

"Although this vacancy rate appears high, it constitutes only a two to two and one-half year supply, compared to other major overbuilt markets such as Denver and Houston," said Robert McNichols, president of Del E. Webb Realty and Management Company. "In those cities, 24 percent vacancy rates constitute anywhere from a five to 10 year supply." He said he believes 1986 will be another record year for absorption, with totals reaching "somewhere between 3 million and 3.5 million square feet."

Construction on Gateway Park, Patrick Properties' $60 million garden office complex at Central Avenue and McDowell Road, began in February. The 480,000 square-foot project on 8.5 acres is expected to be completed in seven years, with phase I on the southwest corner being ready for occupancy by early 1987. The $24 million phase I will consist of an 125,000 square-foot building and a 70,000 square-foot structure. An aerial walkway has been proposed to link phase I with phase II of the complex, planned for the southwest corner of the intersection. Features of the complex will include a replica of entry gates from Arizona's statehood era, a sculptured fountain, and three glass-bubble elevators. Several marble sculptures have been commissioned and a public art forum, which will allow the Phoenix Art Museum to present more cultural amenities, will be included. When completed, the entire Gateway Square will boast more than 30 pieces of original artwork.

Construction has begun on Greenway Palms, the first residential development of a $500 million planned community in Peoria, called Desert Harbor Joint Venture, on 477 acres near 91st Avenue and Thunderbird Road. The Greenway Palms is a retirement complex that will include 192 condominiums with prices ranging from about $68,000 to $85,000, according to Kate Hansen, spokeswoman for the development. Plans for the larger Desert Harbor call for 2,400 residential living units ranging in price up to $250,000. A resort hotel, shopping center, and a 46-acre lake are also planned. The joint venture is expected to be completed by 1991.

Tucson Construction has been awarded a contract for the construction of Jeffco Incorporated's 70,000 square-foot plastics manufacturing facility in Tucson. Jeffco will be located at the Eastside Commerce and Research Park near 22nd Street and Pantano. Construction of the new facility is expected to be completed by early May 1986. The company will manufacture plastic office products such as report covers and binders for mail order distribution.

RACO Development Corporation begun construction of its $6.5 million RACO Research Plaza in December. The R & D project, located at 1550 West Deer Valley Drive, will contain 120,000 leasable square feet with capabilities to expand to 150,000 square feet of space for large tenants. The project also will offer hangar availability to house two corporate jets, and RACO is working with the city of Phoenix to offer direct taxi-way access to the Deer Valley airport. The plaza, situated on an 8.8-acre site, will be high-tech in design.

LAYOFFS - Intel Corporation laid off 140 more workers in the Valley on January 15. During 1985, they had laid off 215 workers, and this new move will leave the company's local work force at about 2,600. About 40 percent of those laid off were management and professional personnel, 30 percent were technical and administrative staff, and 30 percent were production workers, according to Frank Vaughn, public affairs officer for Intel in Arizona. He added, "Intel went 11 years without a layoff, but now we have had three within a year." The same day as the layoff, the company reported a loss of $15 million for the fourth quarter, and it blamed depressed conditions throughout the semiconductor industry.

The Pinto Valley Copper Corporation in Globe also announced on January 15 that they will terminate 60 of its 245 salaried positions by the end of the month, blaming continued low prices for copper. Joe Bost, manager of administration, said the 60 employees will be given the option of early retirement or voluntary termination. Those who choose termination will receive a maximum of 12 weeks' salary, plus any earned vacation time. Early retirement will carry with it agreed-upon benefits but reduced pensions. One mine employee, who requested anonymity, said that the strongest complaint was that employees were given only a week to decide.

Honeywell Incorporated told 250 of its Phoenix employees on January 16 that they will lose their jobs in two weeks, but that all but 100 of them will likely be hired by Southwest General Industries of California, which is negotiating to buy Honeywell's manufacturing facilities at Metrocenter. The giant electronics company intends to quit making some components for its mainframe computers and start buying them from Southwest after that company buys the Metrocenter facilities and hires about 150 of the 250 former Honeywell workers. All of the job terminations will be in Honeywell's Large Computer Products Division, which employs 3,200 of their total Phoenix-area payroll of about 5,200 people.

The Inspiration Counsolidated Copper Company in Globe also announced on January 16 the impending layoff of 300 hourly and salaried workers in a cost-cutting drive. Richard Sparks, vice president for human resources, said that they are closing the crusher and concentrator and that the production cut is anticipated "for a one-year period at this point." Inspiration has separate contracts with nine unions, and terminations "are controlled by the contract," Sparks said. He added, though, that the vast majority of terminations will be in effect January 22.

Arizona Labor Market Newsletter
LABOR MARKET INFORMATION PUBLICATIONS
Site Code 733A
P.O. Box 6123
Phoenix, Arizona 85005

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ARIZONA LABOR MARKET INFORMATION

NEWSLETTER

SPECIAL ISSUE
February 1986

Our readers tell us that the "New Developments" section of the Arizona Labor Market Information Newsletter is a popular, widely read feature. In this special issue, we reprint the "New Developments" from 1985.

The original sources for this information are many but we rely heavily upon newspapers and economic periodicals. A development which was not reported in these sources might have escaped our attention. Space requirements, too, often limit our ability to include all the information that deserves mention. Nonetheless, it is hoped that this will serve as a convenient summary of many of the significant developments pertaining to the Arizona labor force and economy during 1985.

The entries have been organized, by month, under large general headings.

1985 New Developments

MANUFACTURING

January - Varian Associates Inc., the Palo Alto, California-based high technology firm, has opened a new electronics assembly center in Tempe designed to assemble and test printed circuit boards for 14 of the company's 21 divisions that produce systems and components for the defense, medical, and communications markets. The 55,000 square-foot plant has a current staff of 10 but will eventually employ 250 people when it reaches full operation in 1987. Of the 240 people to be hired, according to a company spokesman, 100 will be engineers and technicians and the rest will be hourly assembly people.

Gates Learjet Co., which has recently laid off 400 of its Tucson work force, has made special efforts to help the discharged employees find jobs with other companies. As a result of these efforts, including an "outplacement job fair," some 175 ex-employees have found full-time jobs. Of that number, 110 left Tucson for employment and 65 are working in Tucson. The majority of the 400 persons laid off at the airplane manufacturing plant were sheet metal workers. Another large category was electronic technicians and assemblers.

February - Penn Athletic Products, the nation's largest maker of tennis balls and racquetballs, is moving its headquarters from Monroeville, Pennsylvania, to Phoenix. The headquarters building, set for completion in April 1985, is being built next to

Arizona Department of Economic Security

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Arizona Labor Market Information Newsletter
WINNER OF THE ICESA 1985 LMI PUBLICATION AWARD

Nancy Augustin, editor
Processed by R.A. Clerical Support Unit

the company's production plant and R & D facility in the 43rd Avenue Industrial Park. Nine key staff members will make the move to Phoenix. The company will be hiring between 20 and 25 administrative personnel beginning this month.

Hughes Aircraft Co., which is already Tucson's largest industrial employer, plans to hire about 500 people in early 1985. Most of the positions are for electromechanical assemblers, with a minimum of six months industrial soldering experience required or certification from a recognized training program. Salary is to start at $4.50 per hour. The hirings will bring the total number of people employed in the Tucson missile manufacturing plant to about 7,000. Additional workers probably will be hired later in 1985.

March - Bowmar Instrument Corporation, originator of the first hand-held calculators, will be moving its headquarters from Acton, Massachusetts, to Phoenix. The company is seeking an acquisition or a merger in the Phoenix area, and to be present in the Phoenix area within six to 12 months. Having long since abandoned production of calculators, the firm is now a manufacturer of precision electronic and electromechanical products. Little or no new employment for Phoenix-area residents will result from the move by Bowmar's small corporate staff.

April - Tucson's Arizona Daily Star polled executives of area electronic firms to learn of their expansion plans. AiResearch Manufacturing lead the list with expectations to add 900 jobs. AiResearch, a subsidiary of the Garrett Corporation, has broken ground on the first 350,000 square feet of an eventual million square-foot plant at 1100 North Oracle Road. This electronic component manufacturer for military aircraft will employ 1,300 when the plant opens about this time of year in 1986. By 1993 the plant will employ 4,000. The company now has 403 workers at two sites in Tucson.

Unitronics, manufacturer of circuit boards, will add about 100 in 1985 according to one company executive. It has recently tripled its plant size to 62,000 square feet and hired 262 bringing its total employment to 495.

The Arizona Daily Star listed the following companies as Southern Arizona's Electronics Top 10 employers ranked by employment:

1.	IBM	5,500
2.	Burr-Brown	1,246
3.	National Semiconductor	700
4.	TEC	625
5.	Unitronics	526
6.	Hamilton Test Systems	470
7.	AiResearch Manufacturing	400
8.	West-Corp of Arizona	300
9.	Thor Electronics	222
10.	Vaeco Instruments	200
	General Instruments	200

Tucson's Hughes Aircraft Co. began construction on a 210,000 square-foot, two-story, $22.5 million structure for its missle-manufacturing facility. When construction is completed, Hughes aircraft will occupy more than one million square feet of buildings. The new space will house a machine shop, assembly area, laboratory, and offices.

A Korean hat manufacturing firm is negotiating with the Hopi Tribal Council for a site in a Hopi industrial park near Winslow. The Young An Hat Co. would build a 115,000 square-foot building and eventually employ 400 Hopis if the lease agreement is approved by the Hopis and the U. S. State Department. The company already has seven plants worldwide, and is building an eighth in Costa Rica.

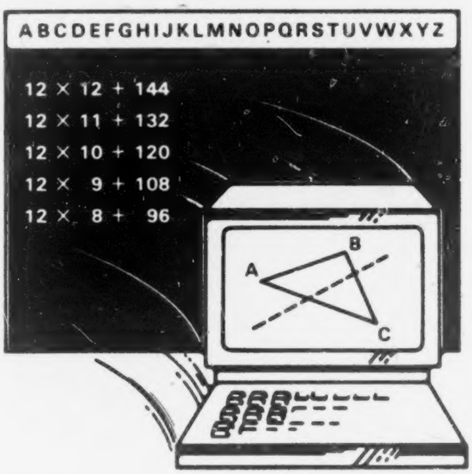
The Navajo Tribal Council is negotiating with the Lamb Weston Co. of Portland, Oregon for a french fry plant on lands of the Navajo Agricultural Products Industries. The Portland company proposes to buy its potatoes from the tribe. Michael Allison, director of economic development for the Navajos, has some concerns about requested up-front investment costs to the tribe of at least $1 million.

May - Sunstrand Corp., an Illinois-based manufacturer of aerospace and industrial equipment, plans to open an electronics-assembly plant at Black Canyon Tech Center on Interstate 17 between Union Hills and Bell roads. On June 1 the firm will occupy two structures, one a 60,000 square-foot single-story building and a second having 40,000 square feet of space. The company officials are not prepared to discuss at this time the number of employees to be hired, but Maurice R. Smith, director of Sundstrand's advanced-technology group, said a second manufacturing site in the West also is being considered by the firm. Sundstrand's products include electrical-generating systems, pneumatic systems, navigation systems, underwater propulsion systems, high-speed pumps, and heating and air-conditioning equipment.

General Semiconductors Industry is building a diode manufacturing facility in Cottonwood. This will be the first high technology manufacturing plant in the small Verde Valley town. Gerald Myers, GSI president said the facility is scheduled for completion in September of this year.

Coleman Products Inc., a Wisconsin-based manufacturer of electronic products, plans to employ 200 local people at a new plant in Nogales, Arizona by September of this year, said Tom Koos, plant manager. The American Motors subsidiary plans to manufacture wire harnesses and other electronics equipment at the new plant.

Productive Programs Inc., a Phoenix software company, has assumed the responsibility of managing the national dealer network for Tailored Data Inc. of Minneapolis. Tailored Data produces a line of fully integrated accounting software packages that are IBM-compatible. William Schuster, president of Productive Programs says that their support staff is being increased along with newly installed 800 numbers for customer calls.



Microage Inc., the parent company of Microage Computer Stores Inc. of Tempe, recently completed a $6 million private placement in preferred stock. The funds will be used to establish a 110,000 square-foot distribution center in Tempe, an 8,000 square-foot retail store, the development of a private label program, and overseas expansion.

Data Processing Security Inc., a Dallas computer installation and security company, is planning to build a $3.5 million computer facility near Sky Harbor International Airport. The 16,000 square-foot plant will serve as an insurance computer to companies in the event of a computer failure. Charles Scoma, vice president of Data Processing, said more than 100 companies have enrolled in the program including Texaco, Shell, Time-Life, Florida Light and Power, and Hallmark Cards. Data Processing has facilities in eight cities of the U.S. The Phoenix facility is expected to open within the next year depending on response in the market place.

Megatronics Inc., has signed a preliminary licensing agreement with Elite Circuits Inc., of San Diego. Meagatronics will manufacture and market printed circuit boards, utilizing the injection-molding technology developed by Elite Circuits. Megatronics also announced the expected completion of installation of a solder coating center in the Phoenix area early this month.

Krueger Technology was able to become the first full-service surface mount contract assembly house in Arizona by placing $400,000 in new production equipment orders during the month of March. The equipment is expected to be in operation by June 15.

MINING

January - About 100 copper miners have returned to work at reduced wages despite a continuing strike at the Anamax Mining Co.'s Twin Buttes Mine. The strike by about 350 production workers began August 1, 1983, over terms of a new contract. The mine has operated during the strike with a work force of salaried employees. The 100 recalled workers will replace 187 salaried employees being laid off as Anamax curtails production.

February - Phelps Dodge Corp. has closed its Morenci smelter, affecting some 450 hourly workers who were hired after 13 unions went on strike in July 1983. The company is accomplishing the closure with a combination of layoffs, early retirements, and shifts to other company operations. The cost of complying with federal clean air laws has been cited by company spokesmen as the reason for the shutdown. Prior to the closure, Phelps Dodge employed about 1,850 people at the complex, including about 1,400 hourly workers.

March - Phelps Dodge Corporation announced one-time losses of $195 million in the fourth quarter of 1984, plus additional yet-to-be posted losses on operations. The one-time losses were expected to reduce Phelps Dodge's net worth by nearly 20 percent--to about $790 million. Fourth quarter losses combined with losses of $50 million reported in the first three quarters of the year will have reduced the company's net worth by at least 25 percent from a year ago.

Phelps Dodge worker union decertification ballot counts were announced on January 25 by the National Labor Relations Board in Phoenix. Thirteen unions are now at risk for potential decertification after all avenues of appeal are exhausted. The total unchallenged vote was 1906 to 87. The unions who may be decertified by this process include: the United Steelworkers, the Machinists union, the International Brotherhood of Electrical Workers, the Operating Engineers, the Plumbers and Pipefitters union, the Boilermakers union, the Carpenters union, the Painters union, the United Transportation union, the Teamsters, the Chemical Workers union, the Carrier's union, and the Metal Trades Council of the AFL-CIO.

By mid-February a second company was in the middle of a union decertification process. Workers at Duval Corporation's Sierrita copper mine near Tucson voted 314 to 286 to decertify the United Steelworkers, Teamsters, Laborers, and Operating Engineers unions as their bargaining representatives. A fifth union, the International Brotherhood of Electrical Workers, was not included in the decertification process.

April - Magma Copper Co. announced plans on March 8, 1985, to spend $71 million to build a new open-pit copper mine and leaching plant. It would build it near its present underground mine at San Manuel. Magma expects nearly 100 workers to be employed drilling and hauling ore from the open pit by the end of 1985. Another 50 will be added when a new solvent extraction-electrowinning plant is finished in mid-1986. Magma's parent, Newmont Mining Corporation's board of directors agreed with Magma engineers that the new open pit and leaching process could produce copper profitably even at today's prices--about 65 cents a pound.

May - The April 4 closing of the Phelps Dodge Corp. New Cornelia copper smelter will mean a loss of 200 jobs for Ajo smelter workers. Company officials said only 35 employees will be transferred or retire when the smelter closes. The high cost of air quality control equipment required to permit the smelter to operate beyond December 31 was cited by company officials as one of the causes for the shutdown. Leonard R. Judd, senior vice president in charge of western mining operations said, "The inherent handicaps of operating a small smelter located a long distance from the sources of concentrates were just too great to overcome." Spokesman Ken Bennett says copper would have to rise above 80 cents a pound and remain there for some time before the company could reopen Ajo's New Cornelia smelter. Prices now are 65 to 67 cents for producers.

Representative Jim Kolbe, R-Arizona, introduced a bill April 4 aimed at stopping the International Monetary Fund from making low-interest loans to Third World copper-producing countries like Chile, Peru, Zambia, and Zaire. Kolbe said they are flooding the copper market and depressing the price. Four point four billion dollars were loaned to those countries between 1975 and 1983.

June - Phelps Dodge claims that it is at about "break even" despite hard times that have fallen on the industry since 1982 and a strike that started on July 1, 1983 at the Morenci and Ajo facilities. In fact, Phelps Dodge claims that it came out ahead in the strike and, as far as the weak copper market goes, Leonard Judd, Phelps Dodge's new chief of western mining operations said, "We can take advantage of a strong market, we can hold our own in a weak market--we think we can hold our own in any case." This optimism comes about despite current copper prices that remain far below the average cost of its production. In fact, Phelps Dodge, the nation's largest independent copper company, is moving to concentrate more on copper and less on other interests while other copper companies are divesting themselves of copper properties. The key to success now, Phelps Dodge says, is for copper inventories to continue dropping enough to drive copper prices back up.

COMMUNICATIONS

January - Continental Telephone Co., which provides telephone service to towns in the White Mountain area and markets communication systems throughout the state, plans to consolidate its Phoenix-based Mountain Division with its Northwest Division in Bellevue, Washington, resulting in the relocation of about 50 employees. Other employees will be transferred to the company's Show Low office, with a current staff of 200. The consolidation is expected to be complete by March 1985.

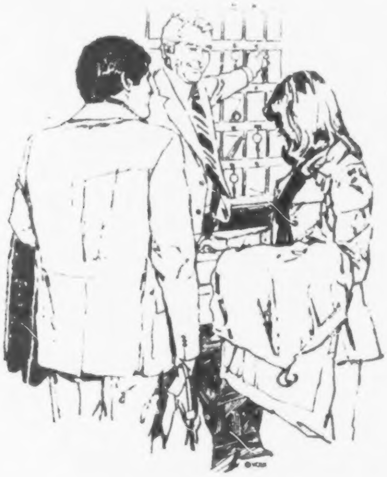
HOTELS

January - The Radisson Hotel Corp. plans to develop four hotels in Arizona within the next year. Two hotels are planned for Tucson, one inn-type hotel will be built in Yuma, and negotiations are under way for building a hotel along the Camelback corridor in Phoenix. Radisson recently opened a hotel in downtown Mesa which will employ about 240 people.

February - American Continental Corp. has purchased the Phoenician Golf and Racquet Club for $20 million and plans to build a massive $150 million resort hotel on the site. In addition, the Phoenix-based home builder has announced plans to build two other hotels--a 300-room business traveler's hotel in Phoenix which should be complete by Christmas 1986, and a 125-room luxury inn in Tucson set for completion in mid-1986. Construction on the Phoenician project will begin this summer, with completion expected in time for the 1986 winter season.

May - The city of Bisbee will receive an $800,000 grant to build a 60-room hotel and convention center. The total cost of the project will be $4.9 million and it will be built by Collier-Craft Development Co.

June - Arizona's lodging industry (motels, hotels, and trailer parks) generated receipts of $538 million and paid $150 million to 22,000 employees in 1982, according to the Census of Service Industries conducted by the U.S. Bureau of the Census. Receipts per establishment within the entire lodging industry averaged $764,000 in 1982 and employment per establishment averaged 31 workers. Employee pay averaged just $6,800, which indicates the industry's need for part-time and seasonal workers as well as for a large number of unskilled workers. One-half of the motels, hotels, and trailer parks were outside the metropolitan areas of Arizona, yet due to their small size, their share of the industry's employment and receipts was only about 25 percent. In contrast, lodging establishments in Maricopa County numbered only about 33 percent of the state total, but they generated 60 percent of total receipts. Copies of this study can be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.



PUBLIC ORDER AND SAFETY

January - The state Corrections Department will begin building a 650-bed prison in Winslow this year that will provide about 350 jobs, most of which will probably go to Navajo County residents. The prison is expected to open in 1986.

The Tucson City Council has approved the hiring of 25 police officers. According to the police chief, the 25 officers will be "overhires" that will provide a means of filling vacancies and keeping pace with population growth from anticipated annexations.

LAYOFFS

January - Diamond's Department Stores, recently acquired from Dayton Hudson Corp. by Dillard Department Stores, has laid off 32 of the approximately 600 employees at Diamond's headquarters in Tempe. The cutbacks affected employees in the auditing, financial-planning, credit, and accounting departments. No cutbacks were made at Diamond's stores, which employ about 2,900 people.

Terak Corp., a Scottsdale computer-graphics manufacturer, has laid off 23 salaried employees. Sixteen of the employees worked on the creation of a new product line which is now complete. Terak's computer-graphics systems are designed for computer-aided design and drafting.

Phoenix-based U-Haul International has cut management salaries by 10 percent to meet demands of its creditors and eliminated holiday bonuses for its 10,000 full-time employees. About 4,000 management personnel will be affected by the salary cuts, including 500 based in Phoenix.

February - Kroy Inc., a Scottsdale-based graphics firm that nearly halved its Midwest manufacturing force December 3, has also laid off about 30 engineering and administrative workers at its Scottsdale facility. Kroy blamed the cutbacks on lower sales and earnings in the last several quarters.

Gates Learjet Corp. has laid off more employees at its Tucson factory where about 400 workers were terminated last fall. Approximately 60 salaried and hourly employees were furloughed, chiefly in the finance, payroll, and personnel departments. Few production workers were affected in this round of layoffs.

March - Ramada Inns Inc. eliminated 140 of 700 jobs on Friday, February 1 at its corporate headquarters in Phoenix. Desire for improved efficiency and profitability were cited as reasons for the intended layoffs. The action was expected to position Ramada for future growth and to enable focusing its human resources on priority areas of its business, according to Ramada's president.

Burr-Brown Corporation of Tucson dropped 210 of 280 temporary employees hired under contract through four temporary-help firms in late January. Layoffs came after a short-lived surge in orders that had built up over Christmas holidays. Greater stability for its permanent workforce of 1,300 was cited as the reason for using contracted temporary help. The temporary employees had been working for periods ranging from three to eight months.

Tucson's Pacific Fruit Co., a wholly-owned subsidiary of Southern Pacific Transportation Co., laid off 95 workers during February. Reasons given were lack of demand for refrigerated railway cars to carry fresh produce and frozen foods from California to the East, and strong competition from trucks. Low supply and consequent higher value of the current lettuce crop made truck transportation a more desirable mode, according to growers.

GenRad, Inc.'s Phoenix Service Products Division expected to layoff eight to 15 percent of its 350 employee work force at January's end. The percentages were as specific as GenRad spokesmen could be about the Phoenix location, but 400 of 3,500 were cut from its worldwide operations including Phoenix.

April - ITT Courier Terminal Systems announced plans in February to lay off 350 Tempe workers over a three month period. The layoffs were to begin in March. "Cost containment" was cited as the reason for the cutbacks. ITT had determined it was cheaper to subcontract for component assembly in Korea and Taiwan, than to assemble them here. About 1,350 ITT Courier employees will still be employed in the Valley, and some growth is also expected. Employment expansion will come in the areas of research and development, engineering, marketing, sales administration, sales, field support, and administrative functions, said Jack Milligan, ITT Courier vice president of personnel. The company did plan to make some effort to place laid-off workers in other areas of the firm. ITT plans to keep its headquarters in Tempe.

Intel Corp. announced layoffs in February for its Deer Valley plant in Phoenix as well as for other of its plants on the west coast. Intel's plant at 2402 W. Beardsley Road was to lose 75 to 100 while another 500 were to be laid off in California and Oregon. Those laid off in Phoenix included managers, engineers, software designers, and assemblers. An existing Intel plant in Chandler was not expected to be affected by the layoffs, but another Chandler plant under construction "will stand empty until business improves," according to Frank Vaughn, Intel public relation manager. The layoffs marked Intel's first personnel cuts in 11 years "during a particularly sluggish period in the semi-conductor industry," in the words of Dr. Gordon C. Moore, Intel's chairman and chief executive officer.

Burr-Brown Corp. laid off 37 regular employees after announcing layoffs of 267 temporary employees in February. The regular staff layoffs represented three percent of the firm's 1,260 employees. Burr-Brown Corp. is located at the Tucson International Airport Industrial Park on South Tucson Boulevard.

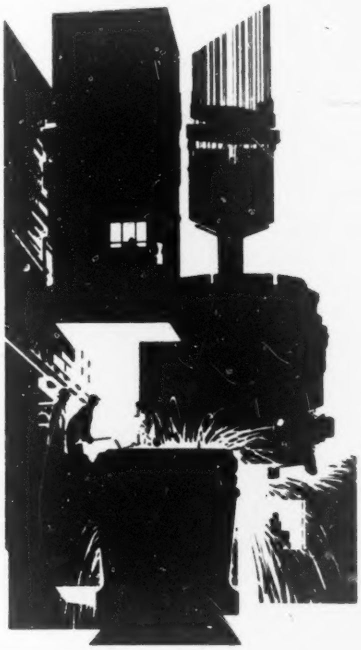
Prescott's KUSK-TV (Channel 7) laid off 12 full-time employees and several part-time staffers on March 15 in a desperate bid to remain solvent. News staff were affected, and the announcements signaled the end of local television news coverage.

July - Motorola announced layoffs of 200 employees in May "despite a series of measures implemented by the company to keep workers employed," said Ken Phillips, a Motorola spokesman. A stagnant market for semiconductor products was blamed, bringing with it a 47 percent decline in Motorola's first-quarter profits compared with the same quarter in 1984. Motorola is the second largest semiconductor manufacturer in the world behind Texas Instruments. Its Semiconductor Products Sector employs about 14,000 people in the Valley and 43,000 worldwide.

St. Luke's Medical Center announced a personnel cutback equivalent to laying off 156 people at the end of May due to a reduction in patient load and income. Officials point out, though, that actual jobs lost would only total about 50 since the bulk of the cutback will come from attrition and a reduction in the number of hours worked by hourly employees. Phil Riske, the hospital's public information officer, said the cuts will be across the board and are very necessary since the hospital's number of patients has averaged only 53 percent of capacity since July 1984.

About 65 jobs at Phelps Dodge Corporation operations in Bisbee are to be eliminated within six months because the company is ceasing its limited gold and silver mining there. The mining company has 91 employees in Bisbee who make from $9.35 to $14.22 per hour. Phelps Dodge expects to gradually reduce the work force to about 25 people. Jack Ladd, director of employee relations, says that more than a third of the workers qualify for early retirement. Others are to be offered transfers to other Phelps Dodge operations if jobs are available.

August - Marathon Steel Co. announced in mid-June that it would lay off 410 workers and discontinue operations at its steel-rolling mill and production facility in south Tempe. The rolling mill, at Kyrene and Elliott roads, produces steel bars used in construction and grinding balls used in mining. Marathon President Frank Biega said, "The plant would need substantial upgrading of its steel-making equipment to overcome its present high operating costs. However, such improvements cannot be justified economically because of excess production in the Southwest and substantial imports of foreign steel, which have resulted in depressed prices for the mill's products. As a consequence, the rolling mill division has been unprofitable for the past several years." Roy Santa Cruz, subdistrict director for the United Steelworkers of America in Phoenix, which represents about 360 of the workers who will be laid off, said that if Marathon follows through with plans to close the plant, he hopes to negotiate a settlement of several thousand dollars to help retrain workers who would lose their jobs.



September - Greyhound Lines announced August 23 that they will lay off 219 Phoenix employees and also move their national charter-bus operations from Phoenix to West Des Moines, Iowa. This announcement was the first indication of how the nationwide "cutback program" announced August 8 would impact upon Phoenix employees. This cutback was announced, and now followed through with, due to declining ridership on Greyhound Lines. In Phoenix, 87 of the company's 180 corporate headquarter employees, most of them managers, will be laid off by September 13. Don Behnke, a spokesman for Greyhound Corp., said it would be "more economical" for the company to recruit locally (in Des Moines) than it would be to transfer the Phoenix employees.

October - Nortronics Company Incorporated of Tucson dismissed 63 local employees in September and will move the manufacturing of magnetic recording heads to its Maquiladora plant in Nogales, Sonora to cut costs. Plant manager, Earl Weibeler, said the closing is "an economic decision based on the downturn in the computer industry. Our level of business hasn't allowed us to keep this plant open." He said Nortronics has seen a substantial decrease in orders from two of its customers--one local and one in Colorado--but he declined to give specifics or identify the companies.

Motorola announced in mid-September that it will either dismiss or transfer 200 employees at its Mesa facility due to a drop in demand for semiconductors. This would bring the total number layed off so far this year in the Valley to 520 employees. However, company spokesman Ken Phillips, added that "It's certainly our intention to transfer as many as possible. These are trained workers." The Mesa plant, at Broadway and Dobson roads, employs about 4,000 people. Valleywide, Motorola has about 22,500 employees.

Gates Learjet Corporation also announced plans in mid-September for layoffs for 400 to 500 employees at its Tucson and Wichita, Kansas plants. The company has yet to determine the exact number of layoffs or how they will be split between Tucson and Wichita. A decline in sales of its business jets, coupled with an end of production of military jets in October, were cited as reasons for the layoffs.

INDIAN JOBS PROGRAM

January - The Navajo Tribal Council has agreed to establish a jobs program that would spend more than $10 million for reservation communities to create jobs in their areas. The money for the program would come from anticipated revenues from a Utah International coal contract renegotiation approved by the council. Approval by the coal company's clients and the Interior Department are also required.

May - A program to provide jobs for residents of the Navajo reservation, where unemployment is more than double that of the rest of the state, was approved by a Senate panel. Two hundred fifty seven thousand dollars will be appropriated to set up employment services offices in Window Rock, Chinle, Kayenta, and Tuba City. The offices will be set up by the Department of Economic Security, but eventually would be run by the Navajo Tribal Council. The offices will provide information on jobs available throughout the state and work to bring potential employers and workers together.

The Navajo Tribe has agreed to use $50,000 in tribal funds to help establish a tribal sewing factory in Fort Defiance. The community agreed to put $35,388 of its own funds into the project and to provide the workers and supplies needed to renovate a tribal warehouse for use as the factory. Michael Allison, director of Economic Development for the tribe, said the factory will produce its own line of clothing, based on clothing worn by Navajo cowboys. The company is also planning to seek government clothing contracts. Initially, the factory will provide 19 greatly needed permanent jobs. Unemployment rates in the Fort Defiance area have been high for many years. The sewing factory is scheduled to be in operation by July 1.

PROGRAM HELPS MENTALLY RETARDED FIND JOBS

January - Jobs were found in Tucson by 30 of 53 mentally retarded young adults who were among 280 enrolled in a two-year experimental program conducted nationally. The Tucson success rate, 56 percent, was greater than in any other city where the program ran. Participants found jobs in housekeeping, laundry, woodwork, electronic assembly, and food preparation. The program is continuing in Tucson through federal job training partnership financing and is operated by the Arizona Training Program office of the Developmental Disabilities Division of the Arizona Department of Economic Security. DES will accept 20 more mentally retarded young adults into the program in the first six months of 1985.

APPRENTICESHIPS

January - The Arizona Operating Engineers will begin accepting applications January 2 for entrance to its joint apprenticeship and training system. Applications will be accepted through January 31 from individuals between 18 and 30 years old who have a high school diploma or the equivalent. For additional information, call the Phoenix office at 252-6138 or the Tucson office at 623-2655.

The Phoenix Electrical Joint Apprenticeship and Training Committee for the Electrical Contracting Industry is accepting applications for its inside wireman and residential trainee programs. Applicants must have a high school diploma or the equivalent and reside in the Phoenix metropolitan area.

Additional information about the programs and applying is available by calling the Phoenix Electrical JATC office at 263-8104.

EDUCATION

January - Maricopa County Community College District officials have projected 3,500 fewer "full-time student equivalents" in the 1985-86 school year than originally expected, probably because of an improved economy. Officials now estimate the equivalent of 27,200 full-time students will attend district community colleges next year, nearly identical to the present figure of 27,141. Economic prosperity has also been cited by Dale Parnell, president of the American Association of Community and Junior Colleges, as the reason for a nationwide plateau in growth among two-year colleges.

GTE Corp., the parent company of Phoenix-based GTE Communications Systems, has selected Arizona as one of six states and the District of Columbia to participate in the $800,000 GTE Corp. Growth Initiatives for Teachers fellowship for 1985. The program provides funds for professional development and school enrichment opportunities to outstanding mathematics and science teachers in grades 7 through 12.

The Defense Department has chosen Carnegie-Mellon University as the home of a new computer-software institute. A consortium of 10 colleges, including Arizona State University, will constitute the Software Engineering Institute. ASU anticipates receiving several million dollars for research over the next five years as a member of the consortium.

The Phoenix Elementary School District is expected to cut at least 50 of its teachers and staff next year. Most of the reductions in staff will not affect certified teachers but will target custodians, attendance workers, bilingual-education aides, librarians, and other non-certified workers. An additional 100 employees, including assistant principals, teachers, and school nurses may also have to be laid off if a proposed budget override fails.

February - The business school at Arizona State University has received a $500,000 grant to form the "Hahn Center for Entrepreneurship." The center will give students hands-on experience in forming their own businesses as well as provide services to individuals in the community seeking entrepeneurial help. A similar center was created last year at the University of Arizona with a grant from Karl Eller, chairman of the Circle K Corp.

A community-college advisory board has recommended the establishment of a nontraditional "community college without walls" in Coconino County. The board supports a form of college that "uses available resources--business and industry, agencies, public-educational entities--on a contract basis for services and facilities." Coconino is among five counties in the state that do not have community colleges.

May - Job opportunities for school teachers will be better in 1985-86 than 1984-85 according to the annual survey of placement officials conducted for the Association for School, College, and University Staffing. The survey indicated "considerable teacher shortages" in chemistry, computer programming, data processing, mathematics, and physics. The placement officials expected a surplus only of physical education teachers. The survey was conducted by James N. Akin, associate director of Career Planning and Placement at Kansas State University. Copies of the report are available, free of charge, from the Association for School, College, and University Staffing, Box 4111, Madison, Wisconsin 66506.

June - On June 27 and 28 Vocational Industrial Clubs of America (VICA) will bring 6,000 vocational students and teachers to the Phoenix Civic Plaza. This will be Phoenix's biggest convention of the year and it will inject $3.2 million into the state's economy, according to Mayor Terry Goddard. Carolyn Warner, state superintendent of public instruction, said that vocational education "is not getting the attention it should" at the national level and that a "surge in that area is long past due." She said 1985 and 1986--the two years for the Phoenix VICA conventions--

"promise to be landmark years for vocational education in Arizona." Mayor Goddard added that the convention will be the first to use the newly completed addition to the Civic Plaza to capacity.

July - Arizona could confront a teacher shortage this coming fall according to statements released by Arizona State University's Career Services office regarding their report "Teacher Supply and Demand in Arizona: Fall 1985." Ray Castillo, assistant director of Career Services points out that "this year (fall 1984 and spring 1985) a total of 1,443 student teachers had assignments in Arizona schools. However, there are 2,730 projected fall openings. So, the shortfall is 1,287." He points out the decline in teachers graduating from the state's four-year universities and colleges as a main cause of the shortage. During the 1983-1984 academic year Arizona graduated 1,005 teachers, less than half of the 2,187 teachers graduated in the 1974-1975 academic year. ASU, which produced 1,086 teachers nine years ago, showed the greatest decline --547. The University of Arizona was down 273, NAU was off 234, and Grand Canyon College decreased by 28. If the state relied solely on an in-state supply of new teachers, it would experience a severe teacher shortage this fall. Fortunately, one-half of Arizona's teachers come from out-of-state.

AUGUST - An investment in college educations pays off in lower unemployment, according to research by Anne Young of the Bureau of Labor Statistics. Her statistics showed that nearly one out of every 10 men without any college training (9.5 percent) was unemployed last year. But only 2.7 percent of men with a college degree--about one in every 37--were unemployed. Even among men with some college training, the unemployment rate was still about half of those without any college, 5.2 percent. Men with more education also were more likely to be in the labor force, that is, working or looking for work. About 85 percent of men with no college training were in the labor force, but 95 percent of men 25 to 64 years old with four years of college were either employed or actively looking for a job.

Women with a college education also are employed more. Only about half of the women with no college training (57 percent) are in the labor force, and 7.6 percent are unemployed. Note that even without any college, working women have about a two percent lower unemployment rate than men without any college. But with four years of college, more than three-quarters of women 25 to 64 years old (78 percent) are in the labor force, and only 2.7 percent of them are unemployed. The low unemployment rate for college-educated women is identical to that of men.

	No College	4 Years College
MEN		
Percent in Labor Force	85.0	95.0
Percent Unemployed	9.5	2.7
WOMEN		
Percent in Labor Force	57.0	78.0
Percent Unemployed	7.6	2.7

One reason college-trained people are seldom unemployed is because they have more jobs to choose from. If no work is available in their chosen field, they can find work as sales clerks or cab drivers until something better turns up. But a factory worker left unemployed because the plant closed has an almost impossible task of making the transition to an office. However, if present trends continue, the future employment picture looks bright because the number of college-educated people has been growing rapidly. A college education may look expensive, but it is dirt cheap when compared to a 9.5 percent unemployment rate.

May - Faculty salaries are up 6.5 percent nationally this academic year and the average faculty member is making $30,960. It was the fourth consecutive year in which salaries increased faster than inflation said W. Lee Hansen, professor of Economics at the University of Wisconsin. Salary increases for college administration also outdistanced the rate of inflation for the current academic year according to a new survey by the College and University Personnel Association.

CONSTRUCTION

February - Construction has begun on the first phase of a $35 million complex at 24th Street and Highland in Phoenix. Phase I will consist of two four-story buildings on five acres. Plans for phase II are not yet finalized. The site is the former location of the DeVry Institute of Technology which has moved into new quarters at 2149 West Dunlap Road.

March - Del E. Webb Corporation announced plans to build a $92.4 million corporate headquarters on 8.75 acres in Phoenix on Seventh Street between Catalina and Earll. It will be a $1.4 million complex including two 12-story, 250,000 square-foot office towers, a 16-story, 270,000 square-foot residential tower with 160 condominiums, and a six-level, partially underground, 670,000 square-foot parking facility. Construction is to begin, pending rezoning approval in April 1986. The Del E. Webb headquarters will occupy the phase I office tower which will front on Seventh Street. The phase II office tower is slated for construction in 1988, if market conditions are favorable.

The Lehndorff Group, owners of the Park Central Shopping Center, announced plans for a $450 million development featuring a high-rise hotel and four high-rise office buildings on land surrounding the mall. Construction is expected to begin in late 1985 and be completed by October 1987. If the City Council approves, the project will include a 40-story office tower fronting Central Avenue, a 14-story office building near the main entrance of the existing mall, and a six-story building toward the back of the 46-acre property. These three buildings would have 925,000 square feet of rental space. In addition, a 15-story hotel is planned for the southeastern corner of the property also fronting on Central Avenue, and would be rented to a major hotel chain. Finally, a 210,000 square-foot, 14-story office facility will be constructed next to the St. Joseph's Hospital & Medical Center parking garage. Two six-story parking garages beside the mall will provide parking for cars using these facilities.

Gateway Square, another multi-million dollar project for Central Avenue was also announced late in January. Going up on two sides of Central Avenue at McDowell and connected by pedestrian walkways, the project will provide another 480,000 square feet of office and retail space. The west of Central part of the project will be under construction in May, but the east side will not be constructed until 1992. Patrick Properties is the developer, and space is planned for a public art forum to allow the Phoenix Art Museum across the street to present cultural shows.

Lincoln Resorts, a $75 million "Arizona Biltmore" style resort complex to be built near Lincoln Drive and Miller Road in Scottsdale, should be completed in about two years, according to the investment-banking firm of Fogel & Co., Inc. of Phoenix. The resort will cover a 29-acre parcel north of Lincoln Drive adjacent to the Arizona Canal, and a planned-city 18-hole golf course in Indian Bend Wash. Lincoln Resorts hopes to win the bid to construct the city golf course. Fogel & Co., Inc. is working in partnership with Dahlberg Industries of Phoenix who have developed such projects as The Lakes in Tempe.

Sun State Savings is financing a $43 million project called The Ridge at Sedona. With 150 acres to be developed, it represents one of the last large privately-owned parcels available for development in the area, according to Parker Development Company developers. Located on Highway 179 in the village of Oak Creek, the development will contain 370 units--59 single-family golf course lots, 67 townhome villas, 137 casitas, a resort hotel, an athletic club, a golf course, and a 70,000 square-foot shopping center.

April - A new 23-story United Bank Tower will be built in Tucson. Construction is scheduled to begin in May. The Tower will be the city's tallest building, and will be part of a three-building, $150 million project to be known as the Tucson City Center. United Bank will move its southern division headquarters into 30,000 square feet on the first and second floors. It will also lease executive office space on the 18th floor. The remaining two buildings of the project will be constructed within five years according to the Reliance Development Group Inc. of New York. Reliance is developing the project in partnership with Venture West Group, Inc.

Construction of a 42,000 square-foot four-story building to be called the Citadel has begun at Pinnacle Peak and Pima roads in Scottsdale. It will be a $7 million office and retail center. Sundt Corporation is the general contractor, and completion is expected in November.

Laderman & Lohr have secured funding from BA Mortgage of Arizona, a BankAmerica Company, to build Midtowne Business Center III. It will be a 93,000 square-foot, $14 million, four-story building at First Place and Earll Drive in Phoenix. Construction will begin in March and completion is expected by early 1986. The site is near Park Central Mall, an area of considerably more additional new development. Koll Co. is the general contractor.

The Corporate at Squaw Peak, a three-story structure on 4.2 acres at 7310 North 16th Street in Phoenix is to be constructed from April through January. Raco Development Corporation will build the $10.8 million office structure at its site less than a half-mile south of The Point at Squaw Peak. Raco executives claim the North 16th Street area is emerging as another very desirable corporate office corridor, because of its proximity to the Camelback and Central Avenue corridors.

Sierra Vista will more than double in size someday if Tenneco Corporation's development plan is approved by the Cochise County Board of Supervisors. Tenneco has filed for approval to develop 4,000 acres--more than six square miles--immediately adjacent to the city. If the development plan is approved it will enable additional growth of 40,000 people living in 18,000 new units. Tenneco has already begun developing 2,000 acres in a project known as Pueblo del Sol.

There are 2,500 completed houses in that development, and Tenneco has invested $25 million putting in streets and utilities.

Houston's Tenneco Corporation is a major land holder throughout Arizona controlling land totaling more area than all of Santa Cruz County. Tenneco views Sierra Vista as in the same stage Tucson was in in 1952 with potential for population growth to 100,000 by the year 2000. Supporting that potential is the presence of Fort Huachuca and the area's desirability as a retirement center, Tenneco officials claim.

The third unit of the St. Johns Coronado Generating Station will be constructed during 1986. Salt River Project's Coronado plant manager, Marshall Rice told the St. Johns' Regional Chamber of Commerce on January 21 that completion of engineering and design work is expected during 1985 with construction to begin during early 1986. Employment levels would then rise over three years peaking at 800 or 900 during 1989. After reaching that peak, construction employment would be reduced as completion is approached in 1991. The new unit should be ready for commercial operation on May 1 of that year. Added operations staff of 170 will be brought on board when the plant becomes operational. SRP also anticipates beginning to soon hire apprentices for training in 1986.

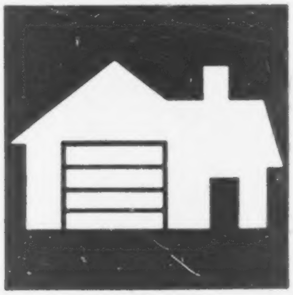
May - With the recent award of Development Action Grants, Shirley Villegas, a South Tucson City Council member, says she is confident the city's high unemployment rate will be reduced. South Tucson will receive a $5,000,000 grant to help finance a technical center. It plans to loan the grant to the DEV/TECH group, a combined management consulting firm, commercial and industrial real estate brokerage, and general contracting business. It will use the loan to buy land for the Butterfield Technical Center. The center will be located at the Butterfield Business Center, northeast of East

Irvington and South Palo Verde roads. Some 625 full-time and 25 part-time jobs are to be created from the medical and electronic research and development center. Construction is scheduled to begin in June and completion is targeted for May 1986, city officials say.

Construction will begin soon on the $20 million Koll Business Center on the northwestern corner of 48th Street and Interstate 10. The 24-acre site will be developed in phases and will contain 300,000 square feet. The center is a joint venture of Koll Construction Co. as the developer, and Williams Lyon Co.

Land clearing has been completed for the $8 million, 225-unit apartment complex of 10 two-story buildings on nine acres at Central Avenue and Highline Canal. It is being built for the Paul Ash Investment Co., Tucson.

A $9 million, 252-unit apartment complex on East Baseline is the first phase of a planned 27-acre commercial and residential project. Future development will include another 275 apartments, 108 houses for senior citizens, and a shopping center at Seventh Street and Baseline. Randy Reid of Steppe & Wilson Architects in Tempe said, "We think this shopping center is very viable." There is only two percent commercial vacancy rate in the area.



A 40-acre medical campus in South Mountain Village is in its second phase. The campus is owned by Memorial Hospital, said Mandy Weaver, of Devenney & Associates LTD. Specialists in the $3 million facility will include obstetrics-gynecology, orthopedic surgery, general surgery, and pediatrics.

Earlie Homes, Inc. has announced the opening of its new subdivision, Alta Mesa townhomes, on McClellan Road east of McKellips in Mesa. The townhomes are part of the 912-acre masterplanned Alta Mesa community which will also accommodate 99 units. The plan calls for a country club, commercial services, shopping, and recreational facilities to be built.

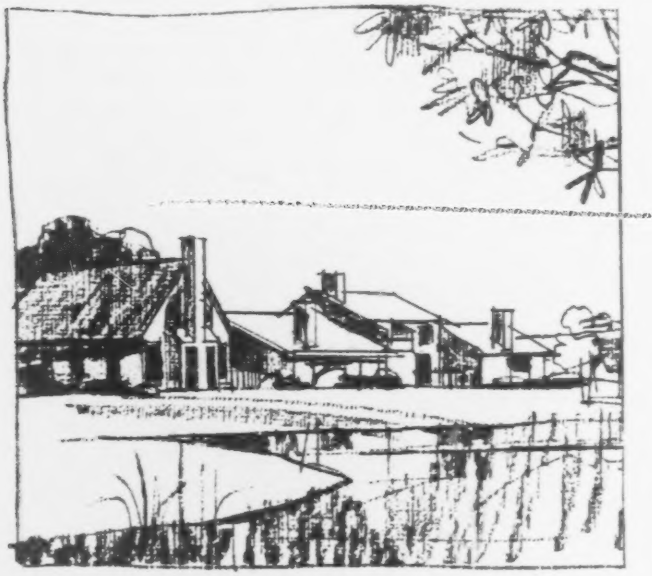
The A.S.U. Bureau of Business and Economic Research ranked the following cities according to their percent increase in home sales for 1984.

1.	Gilbert	49%
2.	Chandler	27%
3.	Scottdale	19%
4.	Tempe	11%
5.	Glendale	8%
6.	Sun City	6%
7.	Phoenix	4%

June - Phoenix could become home to the tallest building in the world if international businessman George Schriqui gets his way. His plan is for a 114-story, 1,692-foot tower taking in eight blocks bounded by Central and Third Street, and Moreland and Garfield streets. The building would be 238 feet taller than the Chicago Sears Tower and triple the number of stories of the Valley Bank Center downtown, which is now Phoenix's tallest building. Inside the tower would be 2.8 million square feet of space: 15 levels of townhouses and condominiums, 23 levels with 480 hotel rooms, two levels of restaurants, two levels of retail shops, and 72 levels of offices. Schriqui says he picked Phoenix because it was in its "takeoff" phase and that his discussions (of the height) with city and community leaders as well as European investors told him that, "they need that drama--they are looking for a kind of identity." City and state officials already have agreed to spend $58,000 to study whether special access can be provided from Central to the Freeway, and aviation officials will have to grant a height waiver for the building to go ahead.

Ground was broken May 6 on a $20 million jai alai complex to be located on the northern edge of the Gila River Indian Reservation. Jai alai competition, which somewhat resembles handball, will bring the first pari-mutuel betting on the sport in Arizona and with it some $7 million or more annually to the Gila River Community. The facility is expected to create 500 jobs, a third of which are guaranteed to the Indian people. C.A.H.R. Inc., which is doing the construction, will also donate $1 million a year from a one percent tax to a special fund for educational and health needs on the reservation. Arizona Attorney General Robert Corbin, however, feels that jai alai betting violates the state criminal code and also that organized crime could become involved. He says, "Las Vegas can't control it. Atlantic City can't control it. What makes the Indians think they can control it?" Mr. Corbin says he will file suit in federal court to shutdown the games if gambling is allowed. The complex is due to open in October 1986.

Tempe's planned "Corporate Lakes" project has been expanded from a $400 million project to a $735 million project which will include a major shopping mall, apartments, and condominiums. The revised plan will expand the original 3.6 million square-foot complex to 5.6 million square feet, with one million square feet of additional space devoted to residential housing. Tom Baker, senior vice president for the Wolfswinkel Group of Mesa, the developer, said "We're talking about doing a major retail complex like the Biltmore Fashion Park." The development will be situated on 133 acres bounded by Baseline Road, the Superstition Freeway, Interstate 10, and Priest Drive. The mall will front Baseline Road and have a lake system behind it.



Office space in Tucson is now about four million square feet with a vacancy rate of 19.5 percent. However, once all the commercial buildings now being built or planned are completed, office space will increase about 50 percent to six million square feet. This is according to a survey conducted by the Del E. Webb Realty and Management Company. The survey showed that 43 office buildings are being built or are in the planning stage. The average size of these new buildings is 43,500 square feet, substantially more than the 32,000 square-foot average of the area's 127 existing office buildings. The building activity is spread throughout several areas: the northwest side, the east side, and the far west side of Tucson will get 500,000 to 548,000 square feet each. The remainder of the projected two million square-foot increase will go to the central and downtown areas.

The Phoenix Civic Plaza has spent $40 million on its expansion that began in 1982 and the results will be seen on June 1, when the new plaza opens. The addition includes a 28,000 square-foot ballroom, 300,000 square feet of exhibit space, and 43 meeting rooms. Also expanded were the kitchen facilities which will now have a feeding capacity of 10,000 people. Dennis Maus, Civic Plaza director says that, due to the expansion, the Plaza will be able to bid for and handle "98 percent of the conventions being held in the country today."

Arizona Futures Corporation is hoping to get a long-term ground lease on an 800-acre parcel of state-owned land in northeast Scottsdale. The land will go up for auction at the end of the year, and Arizona Futures Corporation hopes to be able to use it for a "Scottsdale Futures Park" which is expected to employ some 25,000 people. The park would provide businesses with centralized computer facilities and messenger and financial services. A "New Ventures Incubator Center" would provide managerial support and venture capital to new companies. At a "National Center for Aging Well" researchers would focus on how to stay healthy while living longer. The employees themselves would be surrounded by high-tech amenities, including a teleconferencing center, a minibus, and a helicopter shuttle system. The project is expected to be completed within five years.

July - The International Microelectronics Innovation Center (IMIC) was recently announced as one of the first future tenants of the Arizona State University Research Park. The $50 million, 244,000 square-foot project is designed to provide emerging microelectronics-related companies with leasable clean-room space to conduct research and development and will be "of extreme economic importance to any city or state hoping to become a center for high technology growth," said ASU engineering dean, C. Roland Haden. "Part of our goal will be to attract semiconductor facilities to the area. Having larger firms as tenants will help us do that," Haden said. The IMIC Group will break ground this fall on the first phase of the project which will consist of four to six 5,200 square-foot clean-room modules as well as common space for computer-aided design and other costly equipment used in microelectronics design. "For start-ups, these are expensive items that often sit idle," said Haden. He compares the importance of the International Microelectronics Innovation Center to the joint effort of about 20 major technology companies at the Microelectronics and Computer Technology Corporation project in Austin, Texas. Haden said, "We think this Tempe facility will be better than the MCC project. MCC benefits the companies that already exist and are supporting that research. It's not bringing Austin any new companies." In contrast, he said, "The (IMIC) center will serve as a spawning ground and could conceivably produce 10 new semiconductor companies."

More than $8 million in financing has been arranged for the renovation of two Phoenix Union High School (PUHS) buildings that will be converted to office space. BA Mortgage of Arizona has provided $8,250,000 to developers James and Fredric Kaufman for the renovation of a 142,000 square-foot, four-story building and an adjacent 19,000 square-foot structure. The buildings are situated on 2.3 acres at Fifth Street and Taylor. The project represents the first phase of a planned redevelopment of the historic PUHS campus, according to Gibson Gorman, president of BA Mortgage. "The project is part of BA Mortgage's ongoing commitment to downtown redevelopment," Gorman said. "We have committed more than $32 million to date for downtown development." Walter Jorgensen, senior loan officer, who arranged the PUHS financing, said there is a need downtown for office space comparable to the Phoenix Union space. He said comparable office buildings in the downtown area are more than 90 percent leased. James Kaufman said the city of Phoenix has leased the entire project. He said the city prosecutor, Municipal Court, and the Water and Wastewater Department are scheduled to be relocated to the renovated space. The Kaufman Co. has begun the renovation. Completion is scheduled for October. The project is immediately east of a planned "superblock" consisting of proposed office, retail, hotel, and cultural facilities. The six-block project, bounded by Van Buren, Fillmore, Third, and Fifth streets, could include a major shopping center with an office complex surrounding a central greenbelt garden area.

Prescott has been chosen as the site for a new convention center by James Mack of J. Mack & Company, a Tempe firm. The land adjacent to the golf course on Antelope Hills is the specific site, chosen in part because of its proximity to Prescott's airport. The center will eventually consist of 7,500 square feet of meeting room facilities and a five-story hotel with 250 rooms. J. Mack and Company committed to starting the project within 18 months and, as earnest money, has agreed to deposit $25,000 with the city.

Another project has been announced for Prescott. South West Fishing Industries, a new Phoenix-based company, plans to build a fish farm about 25 miles north of Prescott on 240 acres east of Chino Valley. The company projects a fish-year production of 600 tons of fish from 60 tanks, with subsequent expansions based on revenues from the operation. The farm will eventually produce 4,200 tons of trout per year and employ 60 people.

August - Construction began on the Arizona State University Research Park June 18 with the groundbreaking for the Transamerica Research Center which is being built and will be managed by Transamerica Realty Services. This will be a 50,000 square-foot, $5 million research center and the entire building will be for lease by smaller research and development (R&D) firms. Reginald Owens, executive director of the research park, says that what is important about the Transamerica Research Center is that it will help the research park accommodate smaller R&D firms which could not afford the expense of constructing their own buildings.

Construction is under way on the second phase of the Phoenix Tech Center, an industrial facility exclusively for high-technology users. The $9 million addition to the center at Elliot Road and Interstate 10 is expected to be completed in November, according to John Lewis, vice president of the contractor, Koll Co. The new construction will include three research and development buildings similar to those built in the first phase. The three will total 134,000 square feet.

Ground was broken for a $12.7 million military helicopter training facility to be constructed north of Pinal Airpark at Marana. Operations at the 161-acre site, where scout and attack helicopter pilots will be trained by the Army National Guard, are scheduled to start October 1, 1986. About 600 students will be trained each year.

The joint-venture partnership of Ocotillo West announced plans for a new 2,700-acre mixed-use development in Chandler. They hope to attract the kind of light, "clean" industry found in California's Silicon Valley--and the high-paid employees of these firms as residents. Touted as a "new town" within the city of Chandler, the Ocotillo development takes the concept of a self-contained community a step further in this market. When completed, the development bounded by Alma School, Price, Chandler Heights, and Queen Creek roads will consist of approximately 66 percent residential use (including open space); 25 percent employment, commercial, office, and special use; and 23 percent in recreational areas. Motorola's new Government Electronics Group facility, under construction on the north side of the development, will eventually employ about 6,000 people. Guy Donahue, an Ocotillo West partner, said that no other commitments have been made by business to relocate to Ocotillo, but he envisions a community that will accommodate companies such as Intel and other high-tech firms. Land Planner Wayne Smith said, "Motorola gave great confidence in the project with the decision to build in the area." City officials said they welcome the development with "open arms," and so they should. According to Donahue, the projected assessed value on the land in phase I is $250-300 million, and upwards of $600 million for the entire 5,000-acre project.

A group of business leaders has announced plans to redevelop two six-block areas downtown into $500 million worth of office, hotel, retail, and cultural facilities. The plan would turn Fillmore Street into a wide boulevard and close other streets. Stephen Dragos, executive vice president of the Phoenix Community Alliance, said whether any other city help would be needed would be up to the developers, who are still being sought. He emphasized, however, "It would be better for us and better for the city if we could do it privately." The two projects, called the Central Avenue and Superblock mixed-use projects, are planned around the land holdings of past and present Alliance members: Arizona Public Service Co., Phoenix Newspapers, Inc., and the Snell and Wilmer law firm. The first project, the Superblock, is a 16-acre site bounded by Van Buren and Fillmore streets and Third and Fifth streets. The second project, the Central Avenue development, is bounded by First Street and First Avenue from Van Buren to Fillmore. As with the Superblock, nearly 75 percent of the land is in the hands of four owners in or cooperating with the Alliance. The developers of each project hope to acquire the remaining parcels of land within the areas, but if they are unsuccessful, they will ask the City Council to condemn the property to make it available.

The Arizona NFL Expansion Franchise Ltd. bills itself as the group most likely to entice an NFL franchise to Phoenix. The group is headed by Joe Foss, former commissioner of the American Football League, and Bart Starr, former coach and quarterback of the Green Bay Packers. On June 17, in a meeting before business and government leaders, members of this group presented their proposal for building a 65,000-seat, open-air football stadium and, in a second phase, a 35,000-seat domed baseball stadium. John Colbrunn, a partner in the group, said, "The NFL has said more than once that part of the problem with (establishing a team in) Phoenix is that they don't know with whom they're dealing and that everybody has a (different) plan." Even Mayor Terry Goddard was enthusiastic, saying, "This is clearly the most serious and completely thought-out effort I have seen," though he adds, "But there are others, and that's why we have to go the RFP (request for proposals) route."

The stadiums would be built on 60 acres bordered by 13th and Fourth avenues and Jefferson and Harrison streets. Business leaders have taken the lead in pushing for a stadium and an accompanying football team, but the City Council, through its zoning authority and other powers, holds the key to determining whether a stadium will be built in Phoenix.

September - Commercial lenders in the Valley are becoming more choosy in their office-space lending activity this year. This is largely due to office vacancy rates being high here in the Valley, just as they are nationally. "Generally the market is moving into an overbuilt situation pretty quickly," said Bob Thompson, vice president of commercial real estate lending for Arizona Bank. "And we tend to think vacancy rates will continue to move up over the next two years." Even Southwest Savings and Loan, which as recently as six months ago was aggressively financing speculative--or vacant--office space, is altering its once bullish outlook. Mel Reese, their senior vice president of real estate lending, says, "Today we're considerably more cautious than we were six to eight months ago. We have not been dealing in any major high-rise or mid-rise buildings lately, and in almost all cases we'd like to see considerable pre-leasing commitments on projects we finance." Thompson, from Arizona Bank, echoes these feelings when he says, "In the market we're moving into (Arizona Bank) wants to do business with people with proven track records, excellent financial capacity, and better locations. We're not reaching to do projects with people we do not know, in secondary locations." He adds, however, that, "I think in first-class locations, there are still some good loans to be made. And there are three factors Arizona Bank believes are more important now than before: location, the borrower's financial capacity, and the borrower's expertise." One thing that appears to be certain is that office-space lending activity will slow down this year. "It has got to," concludes Thompson at Arizona Bank.

A joint plan for the beautification of East McDowell Road was announced in late July by the East McDowell Civic Association (EMCA) and the city of Phoenix. The groups have donated $4,500 to the Arizona State University School of Architecture to develop a streetscape design. The results will be presented on September 20. Graduate students from the college will document the area's needs, and a final scheme will be developed by architectural experts and city engineers.

EMCA was founded in 1979 as a non-profit organization to encourage beautification, zoning, and development of the McDowell area from Central Avenue to 52nd Street, between Virginia and the Papago Freeway.

Red Mountain Ranch Inc., a wholly-owned subsidiary of Mobil Corp., has begun construction on its 820-acre, master-planned community in northeast Mesa. The development, known as Red Mountain Ranch, is Mobil's first project in Arizona. It is located two miles from Falcon Field and one mile from the new corporate headquarters of Hughes Helicopters. The area has been zoned for approximately 2,500 residences, according to Carl Schenk, president of Red Mountain Ranch Inc. The site also includes room for a hotel, restaurants, specialty shops, a golf course, and a fully integrated 180-acre business park.

Construction began August 22 on The Pointe at South Mountain, a $55 million resort to be located at Baseline Road and Interstate 10. The Resort will be the hub of a 700-acre mixed-use project by Gosnell Development, which created the other two "Pointe" resort communities in Phoenix. This third, new Pointe is expected to be Arizona's largest resort, employing about 2,300 people with an annual payroll of $24.8 million.

This first phase of The Pointe at South Mountain, scheduled for completion in December, will feature 632 suites, five restaurants, and a convention center. Existing development at the site includes two Pointe-owned restaurants, 350 homes, and more than 1.5 million square feet of occupied office and warehouse space. Future phases are expected to add 333 more suites and four more restaurants.

Construction was begun recently on Hayden Park, a 112,807 square-foot office park at Shea Boulevard and Hayden Road in Scottsdale. The completed complex will include 10 buildings with one-story structures ranging in size from 6,750 square feet to 15,490 square feet. Scheduled for completion in March 1986, the development will feature contemporary buildings with copper-roof sections and landscaped courtyards.

A total of 14,849 homes were sold in Phoenix during the second quarter of this year, according to an Arizona State University College of Business analysis. That number represents a 37 percent increase over the first quarter of 1985.

Following a slow first quarter, new home sales included more than 2,500 single-family homes and about 900 townhouses and condominiums.

The median price of a new single-family home was about $81,000, seven percent higher than the second quarter last year, and $8,500 more than the median resale price. The median price of new townhouses and condominiums was about $64,000, a three percent decline from the previous year.

A 49,000 square-foot assembly and office facility for Foton Production Automation will be built at the Williams Field Business Park near I-10 and Williams Field Road in Chandler. Foton is an international manufacturer of computer-controlled assembly equipment for the semiconductor industry. The $3 million building is scheduled for completion late this year, and is designed so that an equal amount of space can be added in three to five years.

The Koll Company has started development on the final phase of the Koll Business Center-Northwest at Dunlap and 25th Avenue. Phase IV will see the construction of a three-story garden office building totaling 110,000 square feet. Upon completion, the 30-acre business park will house about 130 companies employing 1,500 people.

Biltmore Financial Center Associates has purchased the ARCO service station at the northwest corner of 24th Street and Camelback Road for $1 million. The property is adjacent to the Biltmore Financial Center, currently under construction. The station will be removed from the site, clearing the way for more open space and plaza areas in the complex. Plans also call for widening the intersection to provide easier access to the center, the first phase of which is expected to be completed in September.

Construction began in August on a 133-acre business park at the southeast corner of McKellips and Greenfield roads in Mesa. The developers, Mesa Commerce Center Developers will supervise the master planning, off-site construction, and landscaping of the project, then sell parcels to individual developers beginning in November. David Eaton, a partner in the project, said he expects the park to include office, industrial, and high-tech users. Once interior improvements have been completed, the project will have an estimated value of $19 million.

Kaiser Development Co. broke ground at the beginning of July on the first structure of First Kaiser Center, a 41-acre commercial/industrial, hotel/restaurant complex. Located at the northwest corner of I-10 and the Hohokam Freeway, the $100 million master-planned development is scheduled for occupancy next February. The first structure will be a four-story, 80,000 square-foot brick and glass building.

Construction begins this month on the 250-room Phoenix Airport Hilton Hotel in the Phoenix Airport Center, a 60-acre business park at University Drive and the Hohokam Freeway. Completion of the $21 million business resort is scheduled for fall 1985. The Phoenix Airport Center is expected to include more than a million square feet of office, industrial, and hotel space when fully developed.

October - The Phoenix Planning Commission has approved the building of a high-rise project on the south bank of the Salt River as part of "Southbank," a project which has been proposed by DENRO Limited of Phoenix in partnership with a Minneapolis developer. The unanimous recommendation for approval of buildings up to 15 stories high came despite staff protests that the project would set a precedent for high-rises outside core areas designated for such intense development, and that the project could interfere with plans to add a third runway to Sky Harbor Airport. If built according to plans, the project would put four million square feet of commercial and industrial space between the river and Interstate 10 from 32nd to 40th streets. The developers say they need the tall buildings to give the entire $500 million project a strong identity and to make it competitive. They propose three buildings of eight stories, three of ten stories, and two of 15 stories to be built on 62 acres of the entire 235-acre Southbank parcel.

Construction began on "Capital Centre," the first office building in Phoenix's Governmental Mall to offer space to private business. The $17 million project on 1.6 acres at the southeast corner of 15th Avenue and Washington will have 130,000 square feet of leasable space, including 14,000 square feet of executive suites. The four-story Capital Centre will be constructed with steel frame and contoured block with granite facing. The structure will also feature a two-story rotunda lobby with a 52-foot curved glass exterior.

November - Western Savings broke ground on its new corporate headquarters at the southeast corner of 24th Street and Arizona Biltmore Circle Drive, adjacent to the Mansion Club, also owned by the savings and loan. The complex will include three buildings totaling 125,000 square feet on approximately 11 acres. The two-story, 80,000 square-foot headquarters building will feature one of Arizona's largest copper roofs.

Cardon Homes has started infrastructure improvements on a 400-acre residential community called "Amberlea" in west Phoenix. Located between 83rd and 91st avenues, just north of I-10, the first phase will consist of 136 homes built in a pinwheel cluster. Build-out is estimated at five years and, when completed, the community will have approximately 7,000 residents.

Steer West Profit Sharing Plan will develop a $60 million, 16-story office building at the southwest corner of Central Avenue and Camelback Road which will include 417,000 square feet of office space and five levels of underground parking. The building's north and east faces will feature windows of reflective blue glass accented by stainless steel "pinstriping." The project is scheduled to be completed by the end of 1987.

Del E. Webb Construction Services Co. has begun work on the $39 million, 362-room Phoenix Crescent Hotel, a commercial traveler hotel at Interstate 17 and Dunlap Avenue. The 281,000 square-foot, post-tension concrete facility will employ about 275 people, according to Nickolaus Klotz, Crescent Hotel's president. The Phoenix Crescent will anchor a business park which will be developed in incremental phases during the next five years. It will offer more than 700,000 square feet of office space. The hotel itself will be eight stories high, and will feature a restaurant, conference facilities, and 20,000 square feet of meeting space. It is scheduled to open in November 1986.

Construction is under way on the Chandler Compadre Stadium at Bogle Park, the future site of the Milwaukee Brewers' spring training camp. Located within the 2,700-acre Ocotillo master-planned community at Alma School and Ocotillo roads, the stadium is expected to be complete by spring 1986. When not in use for Cactus League baseball games, the 20-acre park complex will be utilized for community events and as a recreational park.

Tucson has been selected by Del E. Webb Corp. as the site of its next active adult community outside the Phoenix area. They have signed a letter of intent to purchase the 1,000-acre North Village portion of Rancho Vistoso northwest of Tucson, a 7,000-acre proposed planned community. "While Tucson has many similarities to Phoenix, its distinct differences appeal to an alternate market," said Fred Kuentz, Del E. Webb Development Co. chairman. "Both enjoy moderate cost-of-living indices, but Tucson has a more moderate climate, which is important to migrating adults." Kuentz said 300 of the 1,000 acres will be maintained as natural open space. Of the remaining 700, 130 acres will be used for a golf course, leaving 570 acres for residential and commercial development. Potential population is estimated at 5,000.

FINANCE

February - Pima Savings & Loan Association, with headquarters in Tucson, plans to open 15 branches in the Valley in the next five years. The S&L has 23 other offices, most of them in southern Arizona.

Los Angeles-based First Interstate Bank of California plans to cut as many as 875 jobs, or about seven percent of its California work force. A spokesman for First Interstate Bank of Arizona, which is affiliated with First Interstate Bancorp but operates independently, has stated that the California reductions will not affect the Arizona bank and that First Interstate of Arizona anticipates additions to its staff this year.

GOVERNMENT

February - The city of Tucson has been accepting applications for 75 to 100 jobs that will become available over a two-year period for garbage collectors, street maintenance workers, groundskeepers, and utility service workers. Applications for the jobs originally totaled 3,500; about 850 passed the written test and appeared for the second phase of testing.

May - Arizona is finding ways to resolve the problem of delays in distributing foodstamps. Governor Bruce Babbitt recently proposed pumping $1.4 million in additional funds into DES to provide 110 more jobs statewide to help with the processing. A total of 220 workers actually would be added because of matching federal funding. Babbitt's proposal was approved by the state Senate, but was reduced to 36 added workers. The proposal is pending approval from the House.

CONSTRUCTION WORKSHOP

February - A free workshop for minority contractors in the Phoenix area will be held February 15-16. Sponsored by Miller Brewing Co. and a group of community agencies, the two-part workshop is designed to help minorities and economically and socially disadvantaged contractors qualify for construction projects. Registration for the seminar is required and can be made by calling Rick Ponce at 261-8748.

UNEMPLOYMENT INSURANCE

February - Arizona employers began paying lower UI taxes effective January 1 due to the state's healthy economy and low unemployment rate. The tax, which is based on an employer's payroll, is used by the state to pay unemployment benefits. The 1.83 percent tax rate, down from 1.88 percent, puts Arizona among the states with the lowest tax rates.

BUSINESS SERVICES

March - The Avante Business Development Center opened its doors January 10, 1985, to offer low-cost consulting services to minority firms in Arizona. Located at 333 West Indian School Road, the minority business development center offers the services of an extensive team of MBAs, CPAs, attorneys, and other business professionals with expertise in capital formation, management, finance, marketing, procurement, construction assistance, mergers and acquisitions, bidding, business brokering, and other areas. These services are available for a specially negotiated rate to minority-owned businesses, and business owners that are socially or economically disadvantaged. Eligible companies pay only 10 to 25 percent of the total cost for companies of a given size based on gross sales. For example, if a company grosses under $500,000, consulting costs would be $2.50 per hour. If revenues are over $500,000 annually, consultant cost to the client company is $6.25 per hour. The center is a partnership between Avante International and the Minority Business Development Agency (MBDA) of the U.S. Department of Commerce. One major goal of the center will be to assist minority ownners into high technology businesses and away from concentration in service businesses such as janitorial services.

GOVERNMENT/DEFENSE

March - The U.S. Defense Contract Administration Services' Dallas regional headquarters announced that Arizona ranked second in the region in 1984 in the receipt of defense contracts. More than $2 billion split among 5,266 contracts put Arizona second only to Texas in a region including Arizona, Texas, Oklahoma, Arkansas, Louisiana, and New Mexico. The counts do not include contracts administered by a specific service, such as the Army, or contracts in this region but administered by other regions. For example, the Apache helicopter made in Mesa by Hughes Helicopters, presently based in Culver City, California, is administered by the Army and is not included in regional figures. Rank order in the region by firm included:

Texas Instruments, Inc.	$ 4 billion
Motorola, Inc.	958 million
Garrett Turbine Engine, Co.	496 million
Goodyear Aerospace	240 million
Garrett Pneumatic	116 million
Sperry of Albuquerque	116 million

The Arizona Air National Guard will hire 200 and add $17.4 million in construction at its Tucson-based unit. The new additions are in support of an expanded F-16 fighter squadron. The 162nd Tactical Fighter Group will receive an additional 24 F-16s over a period of years with the first six arriving in the fall of 1986.

Hughes Aircraft Co. in Tucson will add 500 to its present work force, if the Reagan Administration's 1986 defense budget line items for Phoenix, AMRAAM, and Maverick missles are adopted by Congress. The items are budgeted in amounts expected by Hughes Aircraft, so staffing increases can proceed as planned during 1985 if no Congressional defense cuts are made to these items.

TRADE

March - Another Price Club cash-and-carry warehouse will be opened somewhere in the Phoenix area, Price Co. executives announced. The announcement was made in conjunction with a stockholders meeting held in Phoenix in January, the first meeting held outside of San Diego, the firm's home base.

A new Diamonds store will be opened somewhere in Arizona during 1985 according to corporate owners, Dillards Department Stores, Inc. Corporate strategy calls for one new store to the Diamonds chain each year within its Arizona and Nevada market territory.

Three new Bobby McGee's Conglomerations will open in 1985 in addition to two restaurants of a brand new concept soon to be tested. The new concept was developed by Muncy's U.S.A. Inc., a corporate affiliate of Bobby McGee's. If successful, the new concept will be further expanded by franchise. In addition, the original Bobby McGee's in Scottsdale will move to a new free-standing building north of its present site.

Perkins Restaurants Inc., a subsidiary of Holiday Inns plans to open 10 family-style restaurants in the Phoenix area within five years. Two will open this year--one in Scottsdale and one in Mesa.

TRANSPORTATION

March - Standard Aero Inc., a Minneapolis-based aircraft maintenance company, opened shop in the former Republican Airlines hangar at Sky Harbor Airport. Company officials intend for the facility to be a $500 million operation within five years, and to employ 800 to 1,000 within three years. At least 250 will be working within a year. The modified hangar will end Sky Harbor's dubious distinction as the only airport among the 20 busiest in the country lacking an airline-maintenance facility. Standard Aero, Inc. is a subsidiary of Federal Industries Ltd., of Winnipeg, Manitoba, Canada.

CLOSINGS

March - The Heileman Brewing Co., Inc. of Phoenix announced it will close its facility at 150 S. 12th Street in mid-March. The loss of Arizona's only remaining brewery will eliminate 92 jobs. Heileman's brews Black Label, Colt .45 Malt Liquor, Mickey's Malt Liquor, and Blatz, and is based in LaCrosse, Wisconsin. A need for improved economies of scale was cited as the reason for closing. The plant has only half the production capacity of other company plants around the country. Heileman's will consider expanding and reopening the plant if it seems feasible. The company has a desire to retain a presence in the Southwest. It will honor recall rights of former employees if it reopens within ten years.

Santa Fe Railway's division-crew change point in Seligman was terminated on February 5. Crews will no longer stop there on the Winslow to Needles run as they have for more than thirty years. Besides losing 12 clerical positions at the depot, the town will lose the lodging and restaurant business that the crew-change point provided.

April - Anaconda Minerals Co. announced plans in March to close its Tucson research center. Its 80 member work force is to be laid off between April 1 and October 1. A depressed metals market and a greater-than-needed research and development capacity were cited as reasons for the closing. Anaconda hopes to sell the 140-acre property, equipment, and 174,000 square feet of buildings after the October closing.

The Thomson Co. is planning to close its Eloy plant. Its work force of 170 will be laid off gradually until the plant's contracts are completed. Its parent company, Salant Corp. filed for financial reorganization under Chapter 11 of the U. S. Bankruptcy code.

December - More bad news for the electronics industry. Data Packaging Corporation, which has manufactured computer reels and plastic boxes at 425 South 67th Street for about 11 years, shut down operations November 1, laying off all of its 80 management and production employees. Company officials said the closing was the result of a significant reduction in demand for its computer-related products and the failure of new products to meet projected sales goals. Employees received severance pay, an extension of benefits, and assistance in finding new jobs.

Digital Applications Incorporated of Phoenix, a printed wiring boards manufacturer, ceased operations at the end of October and laid off its 40 employees. Company officials said the decision was based on continuing losses, declining order backlog, and a changing market that is shifting overseas.

TOURISM

May - Ajo's Chamber of Commerce committee launched a campaign to ensure the town's economic future by encouraging tourism and retirement trade. A great deal of planning, money, time, and work will be necessary to achieve this goal. Bryan Blow, a leader in the committee, listed a few of the projects the Chamber of Commerce is working on: funds are being raised to publish a full-color brochure to advertise Ajo's climate and amenities, and plans for better roads and signs in the community as well as on the highways pointing to Ajo and its attractions. Some economists predicted it will take several years before Ajo's economy is diversified enough to recover in the absence of Phelps Dodge.

July - Arizona's share of the national tourism market declined consistently over the past four years to 1.49 percent in 1985 down from 1.6 percent in 1979. In light of this, director of the Arizona Office of Tourism, J. Phillip Keene III, has asked the state legislature to double its budget to approximately $4 million. Keene says Arizona is "missing the boat" by not doing more tourism promotion and that "we can't take it for granted that people will keep coming here on their own." Keene sees public dollars spent on tourism as "an investment, not an expenditure," as he points out the strong growth in tourism in the late seventies that occurred with only minimal expenditures from the state budget. Currently, Arizona ranks 34th in national expenditures on promotion of tourism.

August - Tourism-related jobs should total 39,300 in Pima County this year, up 80 percent compared with 1975, and tourists are expected to spend up to $1.1 billion this year, according to a City Planning Department study released May 21, 1985. The figures rank tourism near high-tech manufacturing and government as one of the county's largest employers, according to David Taylor, director of economic planning and research for the 75-page countywide study. This study was compiled by the city of Tucson in conjunction with the University of Arizona's Division of Economics and Business Research. Some of the major findings of the report included:

- One out of every 6.5 jobs in Pima County in 1985 will be tourism-related, and travel and tourism expenditures this year will increase personal income by $377.2 million.

- The 40,000 or so jobs generated by the tourism and travel industry in 1985 will double in the next 20 years.

- For every job created directly by tourism in lodging, restaurants, transportation, and entertainment facilities, about two others are eventually created indirectly in support services.

- The projected level of tourism and travel industry revenues to the city of Tucson this year will be about $14.4 million and Pima County will get about $30.5 million. By the year 2000, revenue to the city will have tripled, and for the county the revenue will have increased about eightfold.

- Visitor expenditures in Pima County are projected to be between $935 million and $1.4 billion. By 2000, the report projects expenditures to be between $3.1 billion and $3.7 billion.

- Because of the tourism and travel industry expenditures in Pima County, the total personal income impact of this industry in Arizona, including Pima County, will be $431 million this year and is projected to increase to $3 billion by the year 2000.

REAL ESTATE

June - The Phoenix area is attracting even the most conservative investors to its real estate market. Syndicators, real estate investors, pension funds, lending institutions, and individual investors are all attempting to acquire properties in Phoenix. In fact, real estate dollars, which have been traditionally originated locally, as in neighboring California, are now flowing in from all parts of the country. Why? Well, the phenomenon can largely be explained by the area's sound economic and demographic indicators. Over the past decade, Arizona was the fourth fastest growing state in the country with a population increase of almost 40 percent. Arizona ranked fifth nationally in the rate of job growth over the past ten years with an increase of 49 percent. Also, Arizona ranked sixth nationally in the growth rate of personal income over the past decade with an increase of over 218 percent. Maricopa County also had solid growth. Between 1973 and 1983 population in the county increased by over 204 percent. Looking at 1984, estimations of the population increase in metro-Phoenix run as high as 90,000. Over 22,000 new apartment units were built in 1984, yet the overall vacancy rate increased only slightly. The basic fuel for all of this growth and the foundation of investor optimism is the employment market. The unemployment rate in the Phoenix area is about four percent, which is well below the national average. Also, the recent employment growth rate has been over eight percent, which is twice the national average. New jobs have been created each of the past two years at a rate of about 65,000 new jobs. More and more firms are opening new facilities, existing firms are expanding, and investors are positioning themselves to get their piece of the expanding pie.

The Phoenix Community Alliance (PCA), comprised of local builders, real estate developers, and other prominent business people, has proposed a concept called "Superblock." The Phoenix City Council has endorsed the project, and an urban design firm hired by the Alliance reported that master planning six blocks at a time into one cohesive development is the best way for downtown Phoenix development to begin. The starting point, PCA believes, should focus on the general area between Van Buren and Roosevelt to the north, Central to the west, and Seventh Street to the east. This area would fit into the existing development pattern and encourage walking between the Civic Center, Symphony Hall, and downtown's major hotels. While the land has not yet been bought by developers, the Alliance is preparing to plan and coordinate both the Superblock and the area surrounding it "for the collective benefit of the community and the collective benefit of the developers."

A study by Coldwell Banker, a real estate company, reported that Phoenix has the lowest industrial-vacancy rate among major cities in the country. That rate dropped to 1.7 percent during the first quarter of 1985 from 3.2 percent in the last quarter of 1984. This was due to a surge in rentals and a slow down in the construction of large industrial buildings. The national industrial vacancy rate is 4.8 percent. In contrast, the same study showed that Phoenix also has one of the highest office-space vacancy rates in the U.S. among major cities. Overbuilding is blamed. The downtown area's rate is 20.7 percent and the suburban area's is 24.9 percent. However, another study shows that, although the office vacancy rate is high in Phoenix, the number of office workers employed here has been growing faster than in any other major city in the country. Colliers International Property Counsultants says Phoenix has the highest annual growth rate--4.49 percent--in office employment since the end of 1982. Tom Richardson of Colliers said, "The same factors that helped make Phoenix a popular resort and retirement community are now contributing to the sustained growth of the city." Nationally, office vacancy rates are 15.3 percent for downtown offices and 18.9 percent for suburban offices.

MERGERS

July - Western Savings and Loan Association has acquired the business of First Trust of Arizona, a subsidiary of First Bank Systems, Minneapolis. First Trust's office are located in Phoenix, Sun City, and Carefree holding an $18.5 million portfolio of individual and personal trusts.

Ceramic Cooling Tower Company has acquired 100 percent of the outstanding capital stock of Tempe-based RLI Inc., manufacturers of Tradewinds evaporating air coolers. "This will give the company a stronger financial base," said Ted Lanier, RLI president.

MORE OFFICE COST INFORMATION

July - Phoenix is among the five least expensive cities in cost per employee for opening a new office, according to a study by Howard Ecker & Company Real Estate, Chicago. The cost per employee is equivalent to non-rental costs plus one year's rent for 200 square feet of office space.

COST PER EMPLOYEE FOR OPENING NEW OFFICE

New York	$24,042	Houston	$15,216
Washington	21,288	PHOENIX	15,093
San Francisco	20,312	Atlanta	15,036
Boston	20,285	St. Louis	14,267
Los Angeles	19,859	Kansas City	14,136

Office rents are 25 percent of the cost of opening a new office. Other costs include furniture and fixtures, office and electronic equipment, interior improvements, decorating, carpeting, design services, and moving expenses. (See April 1985 Newsletter for related article.)

REHIRES

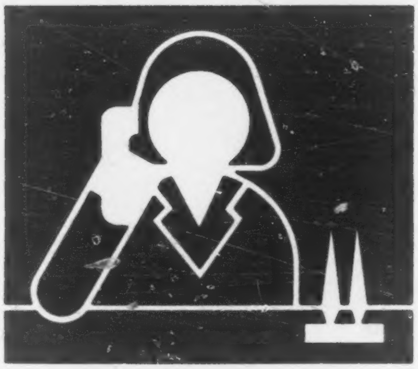
August - Gates Learjet in Tucson announced in mid-May that they were resuming production of their largest jets, and by the end of May had rehired 60 of the 400 workers they hope to rehire by the end of this year. A company spokeswoman said 78 percent of the former employees contacted agreed to come back. Many are leaving other jobs to do so. People who do finishing work on the jets were the last to be laid off and are the first being rehired. Reinstated workers retain seniority and accrued benefits.

AMERICAN INDIAN STUDENTS

September - Arizona State University (ASU) held a reception on July 19 commemorating the passage of Legislative Bill 2112. Leaders from tribes and Indian organizations gathered from around the state. This legislation allows a student from a recognized tribe whose reservation land lies in Arizona and extends into another state to be classified as an in-state student. ASU president, Dr. Russell Nelson, commented that the make-up of the university student body should reflect the make-up of the area's minority populations. Some special efforts are being taken to address this. Passage of the 2112 Bill was a benefit to American Indian students. Also, American Indian freshmen benefitted from an orientation designed especially for them on August 13. ASU is also making some efforts to reach out to minority populations in general. Dr. Miguel Montiel, assistant vice-president for Academic Affairs, is in this new position to advise on academic issues related to minority under-representation. In addition, a 15-member advisory committee will be named to address minority issues.

SERVICES

September - Phoenix has experienced the highest annual percentage of office employment growth since the end of the 1982 recession. It had a 4.49 percent annual growth rate in office employment during this period, followed by Dallas at 3.75 percent and Atlanta at 3.12 percent, according to a 26-city study completed by Colliers International Property Consultants. The Colliers Office Worker/Employment Growth Rate measures which markets are growing fastest in relation to their own base. According to C. Steward Forbes, president of Colliers USA, "As employment grows, there is increased demand for new office space. This past year was the best ever for the Phoenix economy and that has carried over into 1985." Other cities leading the Colliers study on percentage office employment growth rate are Miami (3.04 percent), Columbia, SC (2.60 percent), Kansas City (2.53 percent), Seattle (2.13 percent), and Minneapolis (2.13 percent).



Personal computers have become an intrinsic part of educational institutions nationwide. Surprisingly, some educational users have more personal computers than many large corporations. For example, the Macomb Intermediate School District in Michigan has more personal computers than the 10th company on the InfoWorld 100 corporate list. Likewise, Virginia Polytechnic Institute and Los Angeles City Schools would rank among the top 22 companies.

HOW THE TOP 25 EDUCATIONAL USERS RANK
BY INSTALLED BASE OF PERSONAL COMPUTERS

1.	Macomb (Michigan) Intermediate School District	5,994
2.	Virginia Polytechnic Institute	4,100
3.	Los Angeles City Schools	3,785
4.	Clarkson University	3,502
5.	Columbia University-Academic Department	3,198
6.	Drexel University-Administration	3,109
7.	Georgia Institute of Technology	2,519
8.	Stanford University	2,500
9.	Arizona State University	2,023
10.	University of Michigan-Academic/Research	2,006
11.	Stevens Institute of Technology	1,999
12.	University of California	1,998
13.	Massachusetts Institute of Technology	1,700
14.	Maricopa (Arizona) Community College District	1,599
15.	Utah State Data Processing Division	1,553
16.	Brown University	1,501
17.	Dartmouth College	1,499
18.	Brigham Young University	1,390
19.	San Diego City Schools	1,369
20.	Harvard University	1,218
21.	Dallas County (Texas) Community College	1,098
22.	University of Iowa	1,025
23.	Jefferson County (Kentucky) Board of Education	1,019
24.	University of North Carolina	1,014
25.	Triangle University (North Carolina) Computation Center	1,010

EXPANSION

October - Defying the odds in a sagging high-tech industry, Fairchild Data Corporation announced plans to expand its Scottsdale facility by nearly 200 percent. An 80,000 square-foot addition to the present 46,000 square-foot facility will be used for manufacturing activities and offices. Lou Harper, Fairchild's president, said the expansion will allow the company to keep pace with sales and product projections. It will add up to 370 employees to its present workforce of 230.

MORE LAYOFFS, PAY CUTS

November - Motorola's Semiconductor Products Sector is once again laying off employees due to the depth and duration of the semiconductor market down turn. Between 400 and 500 employees are expected to accept early retirement offers, and 300 to 400 will be laid off, furloughed, or transferred. The company is asking some European employees to quit, and all remaining U.S. employees will see graduated salary cuts effective from October 1, 1985 to March 31, 1986.

Intel Corp. has reduced the salaries of nearly half its work force and will shut down production for six days in December in its U.S. operations, including semiconductor plants in Deer Valley and Chandler. The majority of Intel's 2,800 Arizona employees will take pay cuts ranging from 4 to 9.5 percent due to the industry slump. Intel, which laid off 200 workers in Arizona last year, hopes to avoid more layoffs by using salary cuts and freezing all merit pay increases. It was pointed out that higher-paid employees face a larger cut, while workers at the low end of the pay scale will not be affected.

Eleven days after announcing upcoming layoffs for 400 to 500 workers at its plants in Tucson and Wichita, Kansas, Gates Learjet Corp. told 142 of its Tucson employees that they had only one more week to work. The remaining 900 or so employees in Tucson have been told that, in order to cut costs, wages have been frozen until the end of the year and officers and directors have taken voluntary reductions in pay.

NEW JOBS CREATED

November - Nineteen companies representing 10,090 new jobs decided to set up shop in Maricopa County during fiscal 1985 after obtaining information from Phoenix Metrogroup, a consortium of 11 Valley Chambers of Commerce. Metrogroup chairman Steve Jonland touted the tally in mid-September after the release of the group's first annual report. Nearly nine-tenths of the new jobs cited in the report will result from the siting of the new McDonnell Douglas Helicopters Co. (formerly Hughes Helicopters Co.) offices in Tempe and Mesa and the expansion of Sperry facilities in Glendale. According to Metrogroup's figures, 6,300 new jobs were created at McDonnell Douglas and 2,600 new jobs were created at Sperry.

GATES LEARJET RELOCATION

December - Disappointing Tucson and state officials who had hoped otherwise, Gates Learjet Corporation decided in mid-November to move its manufacturing operations to Wichita, Kansas. The move will result in the layoff of 500 to 550 of the company's 815 Tucson employees. The 200 or so employees remaining will be in the corporate headquarters, marketing, and customer service departments of Gates which, at least for now, will remain in Tucson. James B. Taylor, Gate's president and CEO, tried to stress the positive aspect of the corporate headquarters remaining and added that laid-off employees will receive their vacation and sick-leave time, as much as six weeks of severance pay, early-retirement inducements, and continuation of health insurance and counseling for two months after the layoff which takes place December 13, 1985. Taylor said poor decisions have led to the company's financial problems and need for consolidation.

Arizona Labor Market Newsletter
LABOR MARKET INFORMATION PUBLICATIONS
Site Code 733A
P.O. Box 6123
Phoenix, Arizona 85005

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4/1/86 S0465-1

ARIZONA
LABOR MARKET INFORMATION
NEWSLETTER

Vol. X No. 3
March 1986

Unemployment Rate

Seasonally Adjusted
January*

ARIZONA	6.4%
Maricopa Co.	5.3%
Pima Co.	5.3%
UNITED STATES	6.7%

Consumer Price Index

National-January
1967 - Base Year

Wage Earner/Clerical
Worker - 324.3
% Chg. Yr. Ago 3.7

All Urban - 328.4
% Chg. Yr. Ago 3.9

Phoenix-4th Qtr.
1977 - Base Year

All Urban - 191.5
% Chg. Yr. Ago 3.9

Tucson-4th Qtr.
1st Qtr. 1983 - Base Qtr.

All Urban - 115.0
% Chg. Yr. Ago 5.1

* Preliminary

Arizona Outlook

The Annual Forecast Issue

Early each year, employment and unemployment statistics are revised or "benchmarked" for the prior two years. This involves a cooperative effort by the federal Bureau of Labor Statistics and the Current Employment Statistics (CES) programs throughout the United States. The revised data is used to compile the Department of Economic Security (DES) economic forecasts.

The DES research staff focus their efforts on forecasting the economies of three substate regions: the Phoenix area (Maricopa County), the Tucson area (Pima County), and the thirteen nonmetropolitan counties. Rather than attempting to forecast the U.S. and international economies, assumptions are made for key variables such as gross national product (GNP), interest rates, and inflation.

The assumptions behind these forecasts are relatively modest. Real GNP growth is expected to average between 2 to 2.5 percent in 1986 and about 3 percent in 1987. Inflation is expected to average about 3 percent this year, rising slightly next year. Interest rates, long- and short-term, are expected to move downward throughout the year, with long-term interest rates expected to continue falling through 1988.

The primary purpose of the Arizona forecasts is to aid and improve the planning of DES-administered programs. We hope the forecasts also can be of value to others in the public and private sectors who are interested in the economy of Arizona.

Arizona Department of Economic Security

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Arizona Labor Market Information Newsletter
WINNER OF THE ICESA 1985 LMI PUBLICATION AWARD

Nancy Augustin, editor
Processed by RA Clerical Support Unit

Arizona in 1985

In many ways, Arizona's economic performance in 1985 reflected that of the nation. Resource-based industries such as mining, agriculture, and lumber suffered from weak prices in the commodities markets as well as from the high exchange value of the dollar. The strength of the dollar, combined with low demand and swollen inventories, also contributed to the production cuts and subsequent layoffs observed in the electronics industry. In spite of a benevolent Federal Reserve monetary policy which resulted in falling interest rates, the construction industry lost momentum during the year.

Arizona mirrored the upside as well as the downside of the U.S. economy. The rate of job creation remained high in the service and trade industries as consumer spending remained strong. Revised employment figures for 1985 indicate that wage and salary employment increased by 8.1 percent in Arizona. This was slightly lower than the gain of 9.7 percent posted during 1984 and higher than the 6.6 percent originally reported. Finance, insurance, and real estate (FIRE) was the most robust of the service-producing industries. Employment expanded by nearly 12 percent in 1985, improving on the increase of 9.7 percent observed in financial services the year before. Government, trade, and many of the service industries also hired workers in numbers comparable to the pattern of 1984.

Real GNP grew by a rate of only 2.3 percent last year, but U.S. wage and salary jobs increased by 3.4 percent due to the strength of the service sectors of the economy. Similarly, while industrial production waned in Arizona, the state continued to rank among the nation's leaders in employment growth. Although the unemployment rate was falling at the national level, unemployment peaked in Arizona at 7.2 percent in July before trending downward for the remainder of the year.

Preliminary figures indicate that Arizona began 1986 with a small rise in the unemployment rate. It is expected that the recent layoffs observed in manufacturing and

EMPLOYMENT IN ARIZONA
(Annual Averages, in Thousands)

	1984	Growth Rate	1985	Growth Rate
Total Wage and Salary Employment	1,181.9	9.7%	1,277.5	8.1%
Manufacturing	172.8	10.9%	180.7	4.6%
Mining	13.1	-8.4%	12.0	-8.4%
Construction	97.0	23.4%	110.4	13.8%
TCPU	59.8	4.5%	63.0	5.4%
Trade	286.3	9.7%	314.4	9.8%
FIRE	72.1	9.7%	80.6	11.8%
Services	273.2	12.8%	298.0	9.1%
Government	207.5	2.2%	218.4	5.3%

construction will continue for a few months, inducing a slower pace of growth in other industries. Fewer jobs, in combination with increasing numbers of jobseekers joining the Arizona labor force, may push the unemployment rate higher during the first half of the year. By the end of 1986, improved market conditions should reverse the trend in electronics manufacturing and more jobs will become available. As a result, unemployment should be declining by the beginning of 1987.

Employment Forecasts for 1986 - 1988

Arizona, 1986 - 1988

The uncertainty surrounding the future of Arizona's economy is a direct result of the confusing sequence of events in national and global markets observed recently. Prognostications of the path the U.S. economy will follow vary widely. Some observers see a faltering economy currently that will improve by the end of the year, while many economists believe that the recent expansion will continue, only to end (and maybe even slip into recession) during 1987.

The recent collapse of world oil prices is a major point of controversy, with analysts oscillating between exhilaration and horror as the implications are considered. It seems that lower crude oil prices should have a generally benevolent effect on prices, costs, and consumer spending, improving the prospects of nearly every industry in the United States. Yet, when the potential effects on banks with outstanding loans to foreign and domestic oil producers are considered, one is less likely to be optimistic concerning the stability and vitality of financial markets.

This is just one example of many critical factors, some of which are related. Fluctuations in world currency markets and aggressive marketing by American and Asian car builders have yielded a volatile pattern of domestic automobile sales. Other durable goods markets show similar inconsistencies, with a wide range of projected sales for semiconductors, computers, and just about everything else.

Any national or regional forecast for 1986 must take into account the length of the current business expansion and the magnitude of expenditures on machinery and equipment, consumer durables, and office and residential structures during the recovery from the 1981-1982 recession. Another issue to consider is the impact of federal budget reduction policies on government spending. Federal spending cuts may affect employment and income directly through staffing cuts, reduced payments to individuals, and slower production and hiring by defense contractors.

These issues are especially important in Arizona. Electronics equipment manufacturers had a rough time in 1985 due to high inventories, sluggish orders, and formidable competition in domestic markets from offshore producers. Market conditions, while improving, were generally weak at the end of 1985. Employment in Arizona's machinery sector, which includes many high tech firms, dropped by 5,500 from January to December. It is expected that employment will continue to fall in this category, perhaps by as much as 5 percent, before demand improves sufficiently to warrant increased production. By the end of 1986, electronics manufacturers will be poised to expand through the next two years.

If it were not for defense contracting, manufacturing employment in Arizona would fall by far more than the percent decline forecasted for 1986. The state's aircraft and missile manufacturers are expected to expand payrolls by more than 10 percent for the third consecutive year. Expansion is likely to slow as the year progresses, however, as apprehension rises regarding the Gramm-Rudman-Hollings bill or other budget reduction measures. The bill, if successfully implemented, could require deep spending cuts by 1987, with slower employment growth being the major result.

Of course, government--federal, state, and local--would be the sector to feel the impact of Gramm-Rudman-Hollings most directly. Government employment increased by over five percent in Arizona last year, with significant increases at each level. Growth in state and local government jobs was especially strong, a reaction to an expanding population clamoring for more schools and municipal services. It is anticipated that the specter of future spending cuts will inhibit the growth of government employment at all levels for the next two years. The prospect of smaller salary increases and reduced operations for public welfare and employment and training programs also will affect aggregate levels of income and spending.

Copper mining will continue to languish for the foreseeable future. Employment has dropped in response to the inability of Arizona's copper producers to compete profitably at current prices. Copper will continue to be mined in Arizona, but we do not expect employment to rebound to the higher levels observed in the past. Even if copper prices rise and production increases, labor-saving technologies will be used and fewer employees will be needed than in the past.

Construction has been a prodigious producer of jobs since 1983, but the second half of 1985 brought with it a decline in employment. At the end of the year, about 110,000 construction workers held jobs in Arizona, nearly 4,000 fewer than in June. Most of the layoffs have been a reaction to a growing surplus of office space and fears of an overbuilt multi-family housing market. These factors contrast with the remarkable strength of single-family housing construction. As interest rates fall, the affordability of new housing should continue to improve, increasing the demand for construction workers. Major projects, particularly roads and power plants, also will contribute to the employment totals, but the overbuilt market segments will offset most of the gains in the growing categories.

With many of the state's basic industries struggling, virtually all of the jobs to be created this year will be in the service and trade industries. A slower rate of income growth and lower demand for goods and services by the basic sectors will reduce employment opportunities in these categories as well. Financial services (FIRE) has experienced phenomenal growth, adding thousands of workers during the last two years. Employment in retail trade has expanded rapidly as the regional economy has prospered. The gains projected for these categories in 1986 are in the 4 to 5 percent range, with faster growth returning in 1987 and 1988. The general softness of manufacturing, mining, and construction will reduce growth in the near term, but the continued expansion of Arizona's population should ensure that the service-producing industries will create thousands of new jobs every year, particularly in the metropolitan areas.

The total number of jobs in Arizona is expected to increase by about three percent this year, with somewhat larger increases forecasted for 1987 and 1988. Unemployment will rise as the growth of the labor force exceeds the number of jobs available in the months ahead, but the jobless rate should decline before the year is over and should continue falling into 1988. Growth in manufacturing and construction will help to provide jobs for an expanding population, especially in the urban areas.

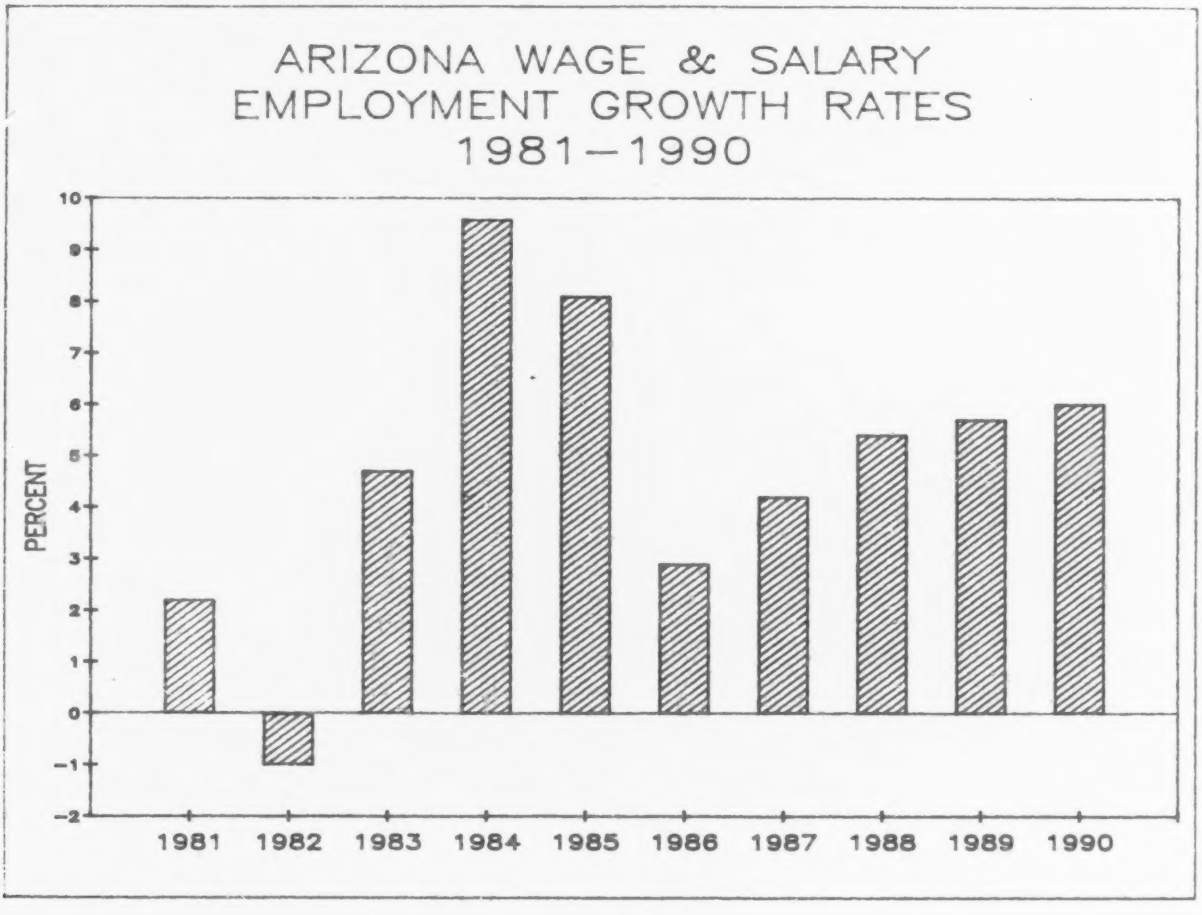
The economy of Arizona has been characterized by rapid growth and transition for much of its history, and the current period is no exception, In the long run we should expect this to continue. Arizona will continue to grow faster than most states, but the evolution of its economic base must proceed to accommodate the expected expansion.

ARIZONA ECONOMIC FORECASTS
(Annual Averages, in Thousands)

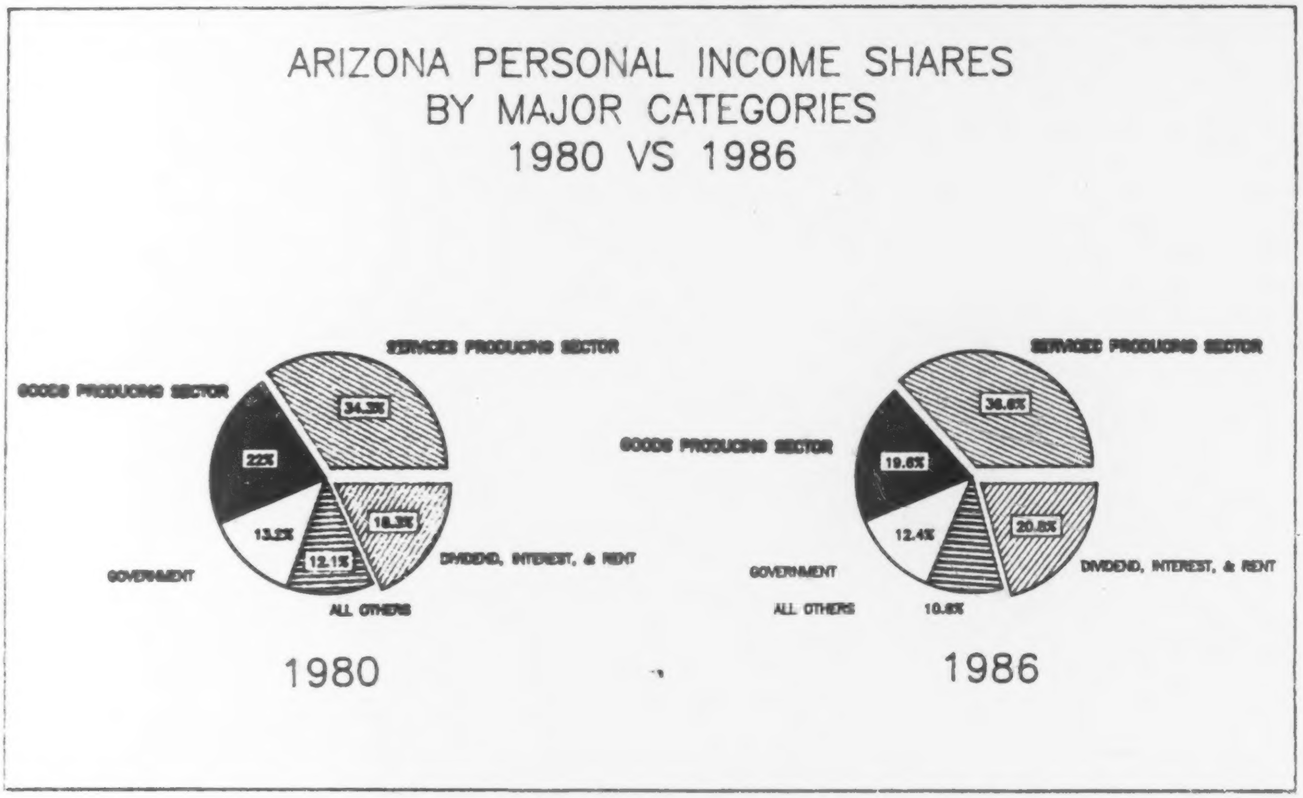
	1985	Growth Rate	1986	Growth Rate	1987	Growth Rate	1988	Growth Rate
Labor Force	1,477.0	2.5%	1,532.8	3.8%	1,583.0	3.3%	1,662.5	5.0%
Unemployed	96.0	35.2%	101.6	5.8%	92.2	-9.3%	91.6	-0.7%
Unemployment Rate	6.5%		6.6%		5.8%		5.5%	
Total Employment	1,381.0	0.8%	1,431.3	3.6%	1,490.8	4.2%	1,570.9	5.4%
Wage and Salary Employment	1,277.5	8.1%	1,314.9	2.9%	1,371.0	4.3%	1,445.8	5.5%
Manufacturing	180.7	4.6%	178.8	-1.1%	186.2	4.1%	198.9	6.8%
Mining	12.0	-8.4%	10.5	-12.5%	9.6	-8.6%	9.0	-6.3%
Construction	110.4	13.8%	111.6	1.1%	119.6	7.2%	129.4	8.2%
TCPU	63.0	5.4%	64.8	2.9%	66.8	3.1%	69.4	3.9%
Trade	314.4	9.8%	326.7	3.9%	342.1	4.7%	363.3	6.2%
FIRE	80.6	11.8%	84.2	4.4%	87.4	3.8%	91.5	4.7%
Services	298.0	9.1%	313.4	5.2%	327.4	4.5%	344.5	5.2%
Government	218.4	5.3%	225.0	3.0%	231.9	3.1%	239.8	3.4%
Personal Income (Millions of Dollars)	39,424.0	9.0%	41,876.0	6.2%	44,853.0	7.1%	48,513.0	8.2%

NOTE: Totals may not add due to rounding.

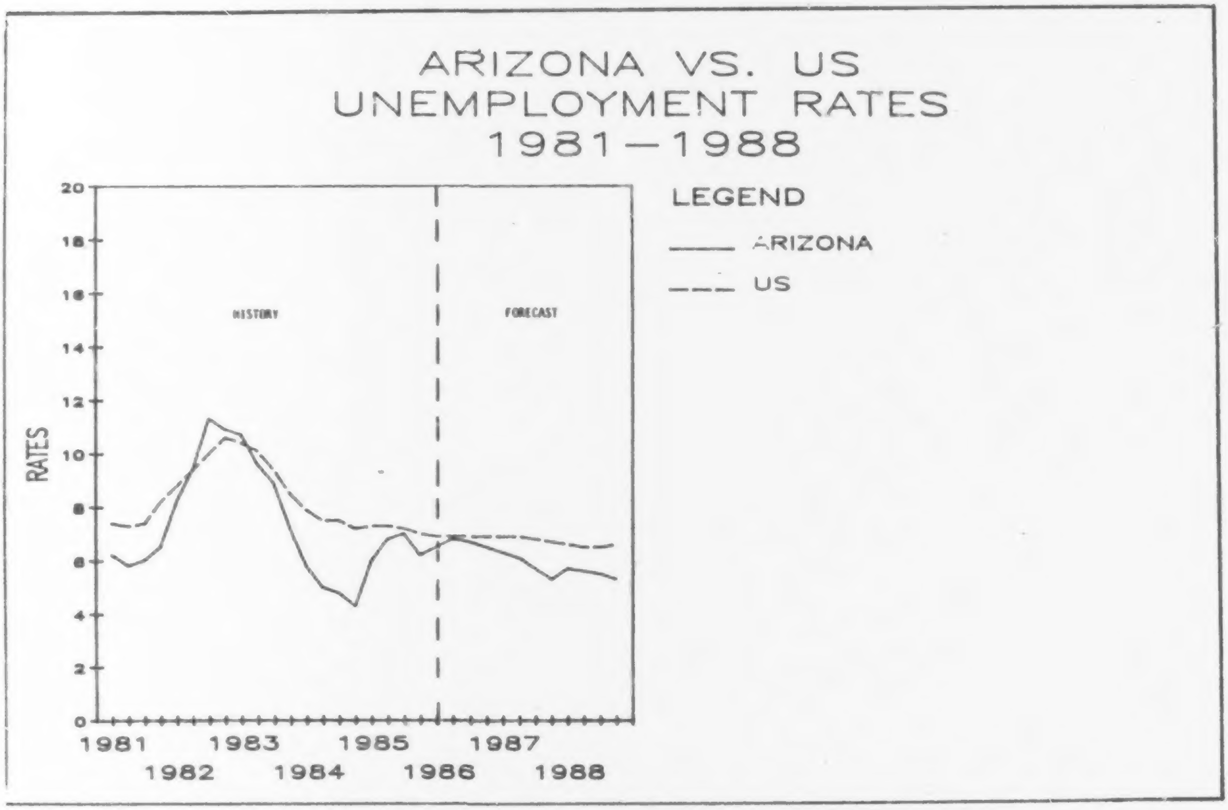
SOURCE: Arizona Department of Economic Security, Research Administration, February, 1986.



ARIZONA WAGE & SALARY
EMPLOYMENT GROWTH RATES
1981–1990



ARIZONA PERSONAL INCOME SHARES
BY MAJOR CATEGORIES
1980 VS 1986



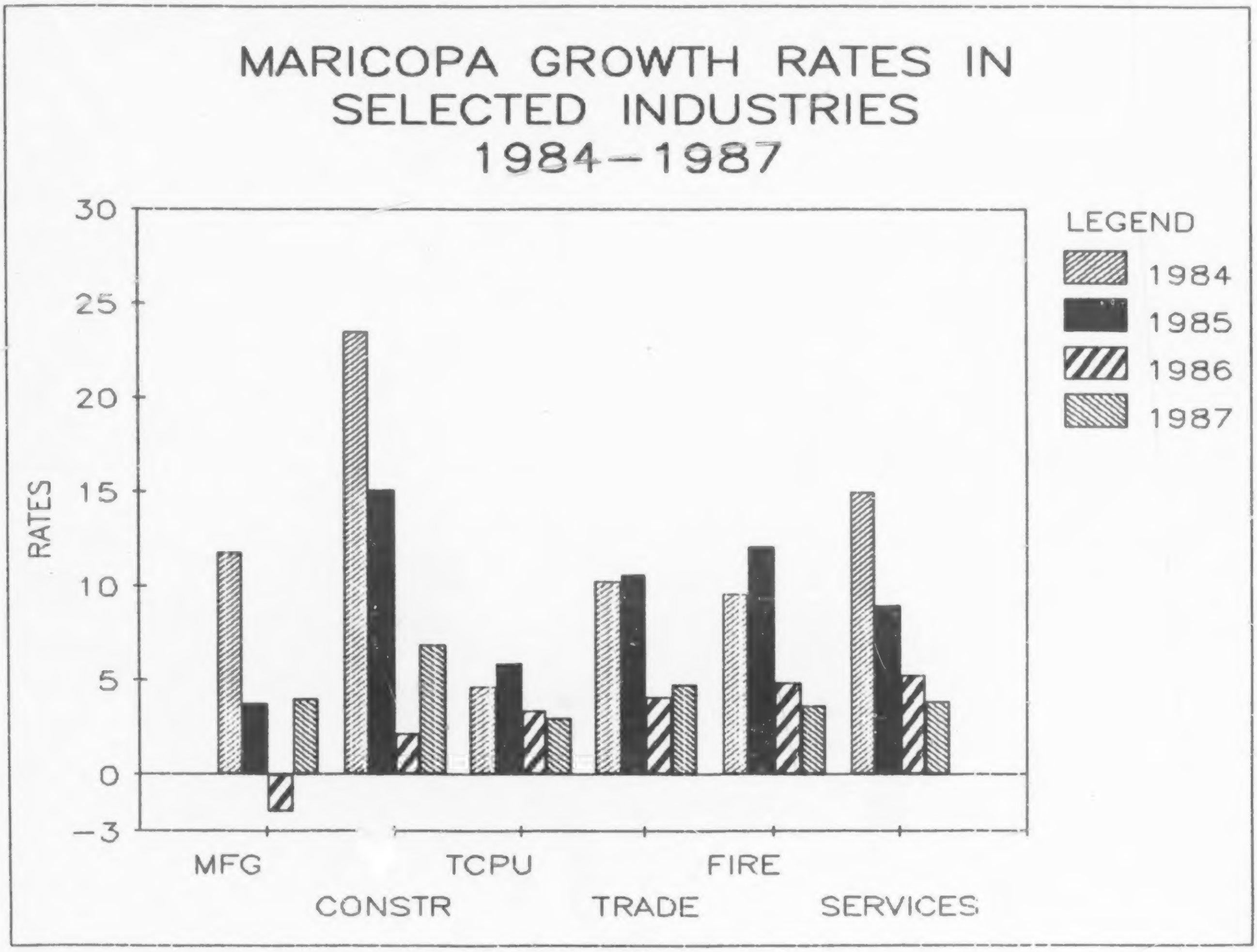
ARIZONA VS. US
UNEMPLOYMENT RATES
1981—1988

Maricopa County, 1986 - 1988

Of the two metropolitan areas in Arizona, the Phoenix area has attracted a larger share of the state's economic growth. There are several reasons, including a relatively secure water supply, an ample supply of developable land, and a generally favorable attitude toward economic growth that is shared by citizens and public officials. When these factors are added to a diverse economic base and the largest agglomeration of urban amenities in the desert Southwest, it is easy to see why the Phoenix area has prospered in recent years.

For the next two years, economic growth in Maricopa County is not expected to exceed the growth rate of Tucson metropolitan area. The gap has narrowed because of the current weakness in the electronics industry. While both Maricopa and Pima counties have many high technology firms located within their borders, the structure of the industry in each county differs. The high technology industry in the Tucson area is dominated by a relatively small number of large firms, some of which have large defense contracts. Some of the remaining companies without such contracts are strong performers that are competing well in product markets.

The composition of high technology in Maricopa County is different. A larger number of electronics manufacturers operate in the Phoenix area than in Tucson; some of them have defense contracts, but many must compete for sales in international markets. Maricopa County also has large numbers of



small firms that supply materials and services to the major manufacturers or occupy small niches in the final markets for electronics products. These factors help to explain the volatility of output and employment among Phoenix area electronics manufacturers. Manufacturing employment in Maricopa County is expected to dip by 2 percent before rising by 4 percent in 1987 and nearly 7 percent in 1988, as the electronics industry responds to improving market conditions.

Construction employment is expected to be flat or falling in much of the state in 1986, but the number of jobs in Maricopa County expected to rise by about 2 percent this year and by 7 percent in 1987. Rapid population growth will sustain residential construction, and the beginning of a massive roadbuilding program in 1986 should help to offset the expected layoffs in office construction. These factors will contribute to continued growth in construction activity for the duration of the forecast.

Trade, FIRE, and services all are expected to expand steadily for the next several years. The rates of growth in these sectors will be well below those observed during the explosive 1984-1985 period, but the population-serving industries will be the major source of jobs in Maricopa County in 1986.

Government employment has become an open question since the appearance of the Gramm-Rudman-Hollings legislation in Congress. We expect that actual and anticipated spending cuts will force all levels of government to reduce staffing requirements, so the extraordinary growth of government employment--over 7 percent in 1985--will be reduced considerably. Even so, the sheer magnitude of expected gains in population for the Phoenix area (60-70,000 new residents per year) should create enough demand for schools and municipal services to generate employment increases of better than 3 percent annually.

The boom conditions that have driven the Maricopa County economy for the last three years are winding down. The strength and diversity of the local economy will allow the Phoenix area to pass through the current doldrums in manufacturing and to be well positioned to resume the pattern of rapid growth that has dominated its history.

MARICOPA COUNTY EMPLOYMENT FORECASTS

(Annual Averages, in Thousands)

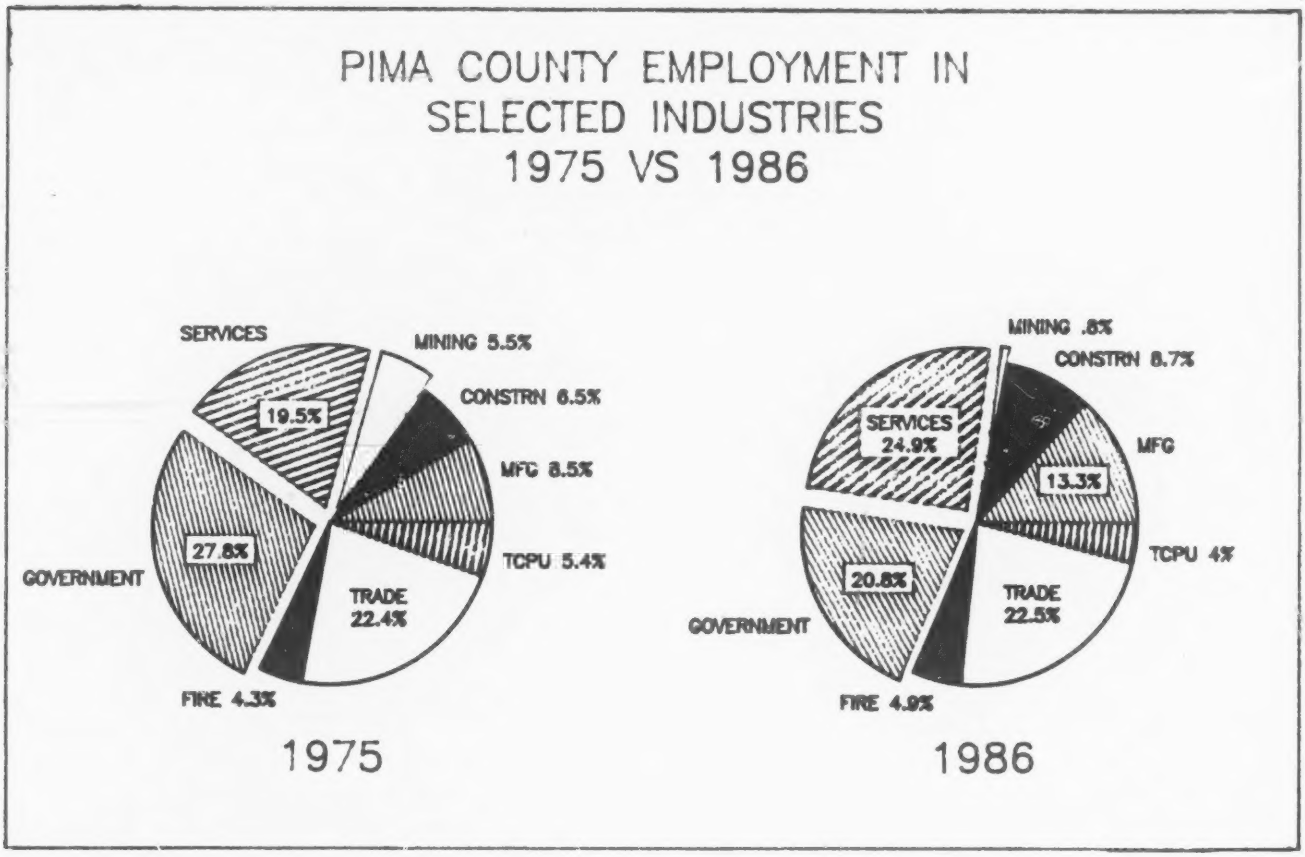
	1985	Growth Rate	1986	Growth Rate	1987	Growth Rate	1988	Growth Rate
Labor Force	912.6	2.8%	955.7	4.7%	987.3	3.3%	1,041.2	5.5%
Unemployed	46.5	36.0%	50.6	8.8%	44.9	-11.3%	46.7	4.0%
Unemployment Rate	5.1%		5.2%		4.5%		4.4%	
Total Employment	866.0	1.5%	905.1	4.5%	942.4	4.1%	994.4	5.5%
Wage and Salary Employment	839.7	8.9%	866.7	3.2%	904.1	4.3%	954.6	5.6%
Manufacturing	130.3	3.8%	127.6	-2.1%	132.8	4.1%	141.7	6.7%
Mining	0.6	-14.3%	0.6	-0-	0.6	-0-	0.6	-0-
Construction	77.3	15.2%	79.0	2.2%	84.5	7.0%	89.4	5.8%
TCPU	41.0	5.9%	42.4	3.4%	43.7	3.1%	45.6	4.3%
Trade	214.8	10.6%	223.8	4.2%	234.6	4.8%	249.8	6.5%
FIRE	63.1	12.1%	66.2	4.9%	68.7	3.8%	71.6	4.2%
Services	201.8	9.0%	212.6	5.4%	220.9	3.9%	232.7	5.3%
Government	110.9	7.5%	114.6	3.3%	118.2	3.1%	123.2	4.2%

NOTE: Totals may not add due to rounding.

SOURCE: Arizona Department of Economic Security, Research Administration, February, 1986.

Pima County, 1986 - 1988

The Tucson area economy has evolved rapidly in recent years. Once dominated by copper mining, the university, the Air Force base, and tourism, a vibrant high technology industry emerged in the 1970s. Although it is not as economically diverse as its metropolitan neighbor to the north, Pima County's economic base has grown considerably. In the 1960's and 1970's, a slump in copper prices would virtually guarantee massive layoffs and a very high unemployment rate until copper markets improved. Unemployment rates did exceed 10 percent during the last recession, but the Tucson area has compiled an impressive record of economic growth since 1983 in spite of the lack of participation by the mining industry.


PIMA COUNTY EMPLOYMENT IN SELECTED INDUSTRIES 1975 VS 1986

The forecast anticipates an employment growth rate for Pima County of 3.4 percent this year, rising to about 5.5 percent by 1988. This pattern is comparable to the forecast for the Phoenix metropolitan area. Manufacturing employment is expected to weather the current slump relatively well, rising by 1.6 percent in 1986 while manufacturing jobs are dwindling in other areas of the state. Defense contracts and the relative strength of the local electronics manufacturers should prevent the large and sudden losses of jobs that have plagued this industry in other regions.

There is no recovery foreseen in the near future for copper mines and smelters in southern Arizona. Copper futures prices are mired below 70 cents per pound, well below profitable levels for most mine operators. Concerns regarding air quality also may inhibit the future growth of copper smelting in the area. Even if leaching technology is improved or other methods are developed to extract copper profitably, labor requirements for the industry are likely to remain well below historical levels.

The construction sector in Pima County is expected to fall back a little in 1986, with 1,000 fewer jobs available. Many major building projects, particularly hotels, resorts, offices, and classroom buildings have been completed during the last year or are expected to be finished in the near future. Relatively low interest rates on mortgages and population growth will keep homebuilding activity at a high level, but a temporary reduction in nonresidential building activity should result in a net loss of jobs this year. The situation should improve considerably next year, with about 1,500 new construction jobs, and 1988 should bring a growth rate in excess of 12 percent.

Trade, FIRE, and services have been expanding in the Tucson area, but at a moderate pace compared to the Phoenix area. One reason is slower population growth in Pima County, with another factor being the status of Phoenix as the regional center for finance and commerce. These trends are not expected to change, at least not within the next few years. Government employment also is expected to rise more moderately in Pima County than in Maricopa County. Budget reduction policies are a factor, but more significant are the slower growth of the Pima County population and the relatively small number of city governments in the county that will require more workers.

When all factors are considered, the outlook for Pima County is generally sanguine. Growth will proceed at a lower rate this year, but the Tucson area will do no worse than similar regions in the Southwest and should fare better than most.

PIMA COUNTY EMPLOYMENT FORECASTS
(Annual Averages, in Thousands)

	1985	Growth Rate	1986	Growth Rate	1987	Growth Rate	1988	Growth Rate
Labor Force	290.0	2.1%	298.5	2.9%	309.7	3.8%	326.1	5.3%
Unemployed	15.3	26.4%	16.1	5.2%	15.1	-6.2%	15.5	2.6%
Unemployment Rate	5.3%		5.4%		4.9%		4.8%	
Total Employment	274.7	1.0%	282.4	2.8%	294.6	4.3%	310.6	5.4%
Wage and Salary Employment	232.2	8.3%	240.0	3.4%	250.6	4.4%	264.3	5.5%
Manufacturing	31.5	9.0%	32.0	1.6%	33.3	4.1%	35.9	7.8%
Mining	2.4	-29.4%	1.9	-20.8%	1.8	-5.3%	1.7	-5.6%
Construction	21.2	15.8%	20.9	-1.4%	22.4	7.2%	25.2	12.5%
TCPU	9.4	5.6%	9.5	1.1%	9.8	3.2%	10.0	2.0%
Trade	52.1	9.7%	54.0	3.6%	56.6	4.8%	59.8	5.7%
FIRE	11.5	13.9%	11.8	2.6%	12.4	5.1%	13.2	6.5%
Services	55.9	10.9%	59.8	7.0%	63.5	6.2%	66.9	5.4%
Government	48.4	3.0%	50.0	3.3%	50.8	1.6%	51.6	1.6%

NOTE: Totals may not add due to rounding.

SOURCE: Arizona Department of Economic Security, Research Administration, February, 1986.

Nonmetropolitan Counties, 1986 - 1988

It would not be appropriate to describe nonmetropolitan Arizona as a single region sharing the same characteristics. In fact, the 13 counties represent a remarkably varied aggregation of people, climate, terrain, and economies. Even the classification of data by county is somewhat artificial. Some settlements straddle county lines; large portions of the Native American reservations sprawl across county and state boundaries. Until we improve our ability to develop reliable forecasts of smaller, rural economies, we will be unable to articulate the texture and complexity of much of Arizona.

The nonmetropolitan regions of Arizona do have some characteristics in common. Most have economies based on natural resources, agriculture, tourism, or government. Some towns and cities have a number of workers employed in the production of manufactured goods and electrical power, while others depend on international commerce to provide jobs in wholesale and retail trade. Although some of the larger cities such as Flagstaff, Yuma, Sierra Vista, and Prescott are growing and have the potential to develop into metropolitan areas, none of the 13 counties possesses the kind of diverse labor markets that residents of large urban areas enjoy.

The general slump in commodity prices--copper, cotton, cattle, lumber, etc.--has battered the resource-based economies of nonmetropolitan Arizona in recent years. The high value of the dollar (and correspondingly cheap foreign commodities) has exacerbated the problem. In this respect, rural Arizona has more in common with other regions of the western United States than it does with Phoenix and Tucson. Since most commodities markets are expected to remain soft in the near future, the forecast projects a growth rate of about 1 percent in 1986, improving to nearly 4 percent in 1987 and 5 percent in 1988.

Although it is difficult to determine the distribution of employment gains among the communities in the state, it would be reasonable to say that the cities mentioned earlier, along with Casa Grande and Bullhead City, will probably grow faster than the average; while others, especially the mining communities, may continue to experience declining employment and a shrinking labor force. Unemployment will remain relatively high, averaging 12.5 percent in 1986 but falling to 9.9 percent by 1988.

The continuing shortage of jobs in the reservation areas of the state will result in even higher rates of unemployment. Progress has been made in the industrial development of some reservations, but fewer jobs will be available than are needed. Unemployment also will remain high in the border regions of southern Arizona. Nogales and other communities depend on trade with Mexican citizens for a large share of their job opportunities. The Mexican national debt, falling oil prices, and the prospect of drastic austerity programs will erode the purchasing power of the peso and prevent major improvements in the border economies from occurring.

In the long run, nonmetropolitan Arizona should see better times. Farm and metals prices should improve, the value of the dollar should gradually fall, and the natural attributes of these communities should allow them to attract a larger share of the new residents that will migrate to the state.

Brian Cary
Jalal Ahmad

NONMETROPOLITAN COUNTIES EMPLOYMENT FORECASTS
(Annual Averages, in Thousands)

	1985	Growth Rate	1986	Growth Rate	1987	Growth Rate	1988	Growth Rate
Labor Force	274.4	1.9%	278.7	1.6%	286.0	2.6%	295.3	3.3%
Unemployed	34.2	38.5%	34.8	1.8%	32.2	-7.5%	29.3	-9.0%
Unemployment Rate	12.5%		12.5%		11.3%		9.9%	
Total Employment	240.3	-1.8%	243.8	1.5%	253.8	4.1%	265.9	4.8%
Wage and Salary Employment	205.6	4.5%	208.2	1.3%	216.4	3.9%	226.9	4.9%
Manufacturing	18.9	2.7%	19.2	1.6%	20.1	4.7%	21.3	6.0%
Mining	9.0	-0-	8.1	-10.0%	7.2	-11.1%	6.8	-5.6%
Construction	11.9	2.6%	11.7	-1.7%	12.7	8.5%	14.8	16.5%
TCPU	12.6	3.3%	12.9	2.4%	13.3	3.1%	13.8	3.8%
Trade	47.5	6.5%	48.8	2.7%	50.9	4.3%	53.7	5.5%
FIRE	6.0	5.3%	6.1	1.7%	6.3	3.3%	6.7	6.3%
Services	40.3	6.9%	41.0	1.7%	42.9	4.6%	44.9	4.7%
Government	59.1	3.1%	60.4	2.2%	62.9	4.1%	64.9	3.2%

NOTE: Totals may not add due to rounding.

SOURCE: Arizona Department of Economic Security, Research Administration, February, 1986.

Arizona Labor Force and Employment

January 1986 (in thousands)

	ARIZONA				
				-- Amt Change --	
	Jan.* 1986	Dec. 1985	Jan. 1985	Dec. to Jan.	1985 to 1986
TOTAL CIVILIAN LABOR FORCE**	1525.7	1519.5	1459.5	+6.[illegible]	+66.2
Total Unemployment	98.7	92.8	84.1	+5.9	+14.6
Rate	6.5	6.1	5.8	---	---
Rate (Sea. Adj.)***	6.4	6.3	5.7	---	---
Total Employment	1427.0	1426.7	1375.4	+0.3	+51.6

The Above Labor Force Statistics Should N

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

TOTAL WAGE AND SALARY	1304.1	1323.8	1230.6	-19.7	+73.5
Manufacturing	181.0	182.0	178.1	-1.0	+2.9
Durable Goods	142.5	142.9	141.0	-0.4	+1.5
Stone, Clay and Glass	8.0	8.0	7.6	+0.0	+0.4
Primary and Fabricated Metals	16.8	17.1	16.9	-0.3	-0.1
Primary Metals	8.0	8.1	7.4	-0.1	+0.6
Fabricated Metals	8.8	9.0	9.5	-0.2	-0.7
Machinery	65.1	65.0	70.5	+0.1	-5.4
Other Durable Goods	52.6	52.8	46.0	-0.2	+6.6
Aircraft and Missiles	25.1	25.0	20.4	+0.1	+4.7
Lumber and Wood Products (Except Furniture)	7.6	7.7	7.2	-0.1	+0.4
All Other Durable Goods	19.9	20.1	18.4	-0.2	+1.5
Nondurable Goods	38.5	39.1	37.1	-0.6	+1.4
Food and Kindred Products	8.7	9.0	8.4	-0.3	+0.3
Apparel	5.0	5.1	4.9	-0.1	+0.1
Printing and Publishing	14.4	14.4	14.0	+0.0	+0.4
All Other Nondurable Goods	10.4	10.6	9.8	-0.2	+0.6
Mining and Quarrying	11.5	11.7	12.3	-0.2	-0.8
Copper Mining	9.0	9.2	9.6	-0.2	-0.6
Other Mining and Quarrying	2.5	2.5	2.7	+0.0	-0.2
Construction	109.8	110.4	103.0	-0.6	+6.8
Trans., Communications, and Public Utilities	63.9	64.8	61.5	-0.9	+2.4
Transportation	29.0	30.1	28.3	-1.1	+0.7
Communications and Public Utilities	34.9	34.7	33.2	+0.2	+1.7
Trade	329.6	335.0	303.9	-5.4	+25.7
Wholesale Trade	64.5	64.2	62.0	+0.3	+2.5
Retail Trade	265.1	270.8	241.9	-5.7	+23.2
General Merchandise and Apparel	42.8	47.0	41.4	-4.2	+1.4
Food Stores	40.0	40.7	36.9	-0.7	+3.1
Automotive and Service Stations	31.2	31.0	28.4	+0.2	+2.8
Eating and Drinking Places	96.4	96.1	84.3	+0.3	+12.1
Other Retail Trade	54.7	56.0	50.9	-1.3	+3.8
Finance, Insurance, and Real Estate	84.8	84.3	76.1	+0.5	+8.7
Services and Miscellaneous	305.7	305.9	283.6	-0.2	+22.1
Hotels and Other Lodging Places	30.7	30.4	28.5	+0.3	+2.2
Business Services	67.7	68.8	63.0	-1.1	+4.7
Health Services	75.7	75.5	71.3	+0.2	+4.4
Other Services	131.6	131.2	120.8	+0.4	+10.8
Government	217.8	229.7	212.1	-11.9	+5.7
Federal	40.9	41.3	39.3	-0.4	+1.6
State and Local	176.9	188.4	172.8	-11.5	+4.1
School	102.3	114.0	103.5	-11.7	-1.2

* Preliminary

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

NOTE--Prepared in cooperation with the U.S. Department of Labor,Bureau of Labor Statistics.

Arizona Labor Force and Employment

January 1986 (in thousands)

MARICOPA COUNTY			-- Amt Change --		PIMA COUNTY			-- Amt Change --	
Jan.* 1986	Dec. 1985	Jan. 1985	Dec. to Jan.	1985 to 1986	Jan.* 1986	Dec. 1985	Jan. 1985	Dec. to Jan.	1985 to 1986
947.9	940.8	905.6	+7.1	+42.3	300.9	299.8	288.5	+1.1	+12.4
50.6	46.8	40.8	+3.8	+9.8	15.9	15.0	14.5	+0.9	+1.4
5.3	5.0	4.5	---	---	5.3	5.0	5.0	---	---
5.3	5.1	4.5	---	---	5.3	5.2	5.0	---	---
897.3	894.0	864.8	+3.3	+32.5	285.0	284.8	274.0	+0.2	+11.0

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NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

859.1	870.1	809.8	-11.0	+49.3	237.9	241.0	225.0	-3.1	+12.9
129.1	129.2	130.3	-0.1	-1.2	32.4	32.8	29.7	-0.4	+2.7
102.9	102.7	104.7	+0.2	-1.8	27.3	27.6	24.7	-0.3	+2.6
5.1	5.0	4.7	+0.1	+0.4					
11.2	11.3	11.1	-0.1	+0.1					
51.2	51.2	56.8	+0.0	-5.6					
35.4	35.2	32.1	+0.2	+3.3					
26.2	26.5	25.6	-0.3	+0.6	5.1	5.2	5.0	-0.1	+0.1
5.6	5.6	5.6	+0.0	+0.0					
3.2	3.2	3.0	+0.0	+0.2					
10.4	10.5	10.2	-0.1	+0.2					
7.0	7.2	6.8	-0.2	+0.2					
0.6	0.6	0.6	+0.0	+0.0	2.1	2.1	2.6	+0.0	-0.5
76.6	76.8	72.7	-0.2	+3.9	21.5	21.7	19.3	-0.2	+2.2
42.0	42.5	40.0	-0.5	+2.0	9.1	9.4	9.3	-0.3	-0.2
19.8	20.4	19.2	-0.6	+0.6	4.2	4.5	4.3	-0.3	-0.1
22.2	22.1	20.8	+0.1	+1.4	4.9	4.9	5.0	+0.0	-0.1
226.7	230.1	207.9	-3.4	+18.8	54.1	54.6	50.3	-0.5	+3.8
51.1	50.8	49.1	+0.3	+2.0	7.5	7.5	7.2	+0.0	+0.3
175.6	179.3	158.8	-3.7	+16.8	46.6	47.1	43.1	-0.5	+3.5
27.8	30.7	26.5	-2.9	+1.3	7.6	8.0	7.8	-0.4	-0.2
26.0	26.5	23.8	-0.5	+2.2	6.5	6.5	5.9	+0.0	+0.6
19.8	19.5	18.1	+0.3	+1.7	5.4	5.4	4.6	+0.0	+0.8
64.1	63.6	55.1	+0.5	+9.0	17.7	17.6	15.9	+0.1	+1.8
37.9	39.0	35.3	-1.1	+2.6	9.4	9.6	8.9	-0.2	+0.5
66.5	66.1	59.7	+0.4	+6.8	12.0	11.9	10.6	+0.1	+1.4
207.6	207.7	193.1	-0.1	+14.5	58.3	57.8	53.5	+0.5	+4.8
17.9	17.7	17.4	+0.2	+0.5	5.5	5.2	4.7	+0.3	+0.8
55.2	56.2	51.8	-1.0	+3.4	9.9	9.9	8.8	+0.0	+1.1
50.4	50.3	47.3	+0.1	+3.1	16.0	16.0	15.2	+0.0	+0.8
84.1	83.5	76.6	+0.6	+7.5	26.9	26.7	24.8	+0.2	+2.1
110.0	117.1	105.5	-7.1	+4.5	48.4	50.7	49.7	-2.3	-1.3

-- Prepared by Labor Market Information, Research and Analysis (CPS, 1/86)

Nonmetropolitan Counties
Labor Force and Employment
January 1986

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL CIVILIAN LABOR FORCE*.	15,650	34,725	37,150	12,325	7,975	2,975	4,575
Total Unemployment	3,175	2,900	4,225	1,825	850	275	750
Rate	20.3%	8.4%	11.4%	14.8%	10.7%	9.2%	16.4%
Rate (Seas. Adj.)**. . . .	20.1%	8.2%	10.5%	14.3%	10.7%	8.9%	-INA-
Total Employment	12,475	31,825	32,925	10,500	7,125	2,700	3,825

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL WAGE AND SALARY. . . .	14,250	24,100	32,325	9,950	4,875	2,825	2,625
Manufacturing.	750	2,025	2,750	1,350	200	50	75
Mining and Quarrying	25	150	25	1,525	0	1,700	0
Construction	900	1,200	1,600	450	150	100	150
Trans., Comm., & Pub. Util..	1,900	1,775	2,325	375	175	50	50
Trade.	1,450	5,250	7,550	1,925	1,300	275	850
Fin., Insur., & Real Estate.	250	650	725	250	125	25	100
Services and Miscellaneous .	3,675	3,525	7,600	1,600	850	75	625
Government	5,300	9,525	9,750	2,475	2,075	550	775

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL CIVILIAN LABOR FORCE*.	26,500	25,875	33,825	9,075	32,500	33,775
Total Unemployment	2,725	3,950	4,025	1,000	2,375	4,075
Rate	10.3%	15.3%	11.9%	11.0%	7.3%	12.1%
Rate (Seas. Adj.)**. . . .	9.7%	14.6%	12.1%	12.0%	6.9%	-INA-
Total Employment	23,775	21,925	29,800	8,075	30,125	29,700

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL WAGE AND SALARY. . . .	17,775	19,175	25,575	8,350	21,000	24,150
Manufacturing.	2,275	1,675	3,200	1,075	2,225	1,800
Mining and Quarrying	275	1,125	3,425	0	550	25
Construction	1,200	1,075	1,200	325	1,950	1,450
Trans., Comm., & Pub. Util..	1,075	1,675	925	550	975	950
Trade.	5,100	3,625	4,875	3,475	5,400	7,775
Fin., Insur., & Real Estate.	900	350	725	250	850	1,000
Services and Miscellaneous .	3,625	5,075	2,850	1,225	4,375	4,600
Government	3,325	4,575	8,375	1,450	4,675	6,550

*Adjusted to the Current Population Survey (CPS) to reflect place of residence.
**Seasonal adjustment not applicable for economic assistance programs.

NOTE--Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment For Economic Assistance Programs January 1986

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,514,471	1,416,132	98,339	6.5%
Apache	15,594	12,423	3,171	20.3
Cochise	34,893	31,974	2,919	8.4
Coconino	36,880	32,663	4,217	11.4
Gila	12,214	10,397	1,817	14.9
Graham	7,894	7,048	846	10.7
Greenlee	2,950	2,675	275	9.3
La Paz	4,526	3,768	758	16.7
Maricopa	940,677	890,289	50,388	5.4
Mohave	26,187	23,476	2,711	10.4
Navajo	25,714	21,774	3,940	15.3
Pima	298,806	282,926	15,880	5.3
Pinal	33,579	29,579	4,000	11.9
Santa Cruz	8,991	8,001	990	11.0
Yavapai	32,045	29,689	2,356	7.4
Yuma	33,521	29,450	4,071	12.1

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators. Note: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Estimated Hours and Earnings of Production Workers in Selected Industries in Arizona January 1986

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVG. HOURLY EARNINGS		
	JAN.* 1986	DEC. 1985	JAN. 1985	JAN.* 1986	DEC. 1985	JAN. 1985	JAN.* 1986	DEC. 1985	JAN. 1985
FOR THE STATE OF ARIZONA*									
Manufacturing	392.09	397.58	378.68	40.8	41.2	40.5	9.61	9.65	9.35
Aircraft & Missiles	INA	INA	INA	INA	INA	INA	INA	INA	INA
Food & Kindred Products	385.56	362.79	315.22	42.0	40.4	39.6	9.18	8.98	7.96
Primary Metals	508.93	527.31	511.75	40.2	41.1	40.2	12.66	12.83	12.73
Machinery	342.76	342.26	336.48	38.0	38.5	39.4	9.02	8.89	8.54
Copper Mining	560.98	585.05	579.76	40.3	41.7	41.5	13.92	14.03	13.97
Construction	436.90	410.90	427.52	36.9	34.5	36.2	11.84	11.91	11.81
Utilities	603.78	601.04	566.36	43.5	44.0	43.6	13.88	13.66	12.99
Retail Trade**	240.76	241.40	224.02	33.3	34.0	32.8	7.23	7.10	6.83
Wholesale Trade	373.51	377.70	362.29	39.4	39.8	39.9	9.48	9.49	9.08

* Preliminary
** Excludes eating and drinking places.
NOTE--These estimates are based on a sample of full and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor,Bureau of Labor Statistics.

--Prepared by Labor Market Information, Research and Analysis (1/86)

The Arizona Labor Force in January

The unemployment rate in Arizona inched upward by 0.1 percent in January, narrowing the gap between the Arizona rate and the declining U.S. unemployment rate. Although small increases in the state unemployment rate are expected, it is possible that unemployment in Arizona may creep above the national rate during the first half of 1986.

Revised estimates for 1985 indicate that the state unemployment rate peaked at 7.2 percent in July, just 0.1 percent lower than the U.S. rate at the time. The revised data also show that employment in Arizona establishments increased by 8.1 percent in 1985. While the growth rate was slightly lower than the 1984 growth rate of 9.7 percent, it was higher than the increase of 6.6 percent that was originally reported for 1985.

The employment statistics for January resemble the pattern observed during the second half of 1985. Employment declined in a wide range of categories, but many of the decreases were seasonal. Retail trade in Arizona lost 5,700 jobs in January, which was somewhat less than expected after the holiday retail season. Increases were recorded in restaurants, which added 300 workers in anticipation of winter tourism in the metropolitan counties, and in wholesale trade. The rise in wholesale trade employment is primarily due to the seasonal shipments of fresh fruit and vegetables from southern Arizona to the U.S. interior.

Construction employment dropped by 600 statewide in January, continuing a decline that began last summer. At this time of year, such losses are expected--only the Colorado River valley counties experienced increases last month. However, increasing concern regarding surplus office space in the metropolitan areas of the state should induce a slower rate of office building, resulting in fewer jobs for construction workers. Moderate interest rates should allow sufficient demand for new housing to offset large numbers of construction layoffs this year.

The manufacturing sector, which also experienced problems in late 1985, lost 1,000 jobs in January. Some of the losses, particularly in food processing plants in southern Arizona, are due to seasonal factors. Many layoffs occurred in the durable goods categories and were attributable to the slump in high technology product markets. With the semiconductor industry reporting an improved book-to-bill ratio in January, it is anticipated that the layoffs should cease and employment will begin expanding by the end of the year. Meanwhile, aircraft and defense equipment manufacturers continue to expand their payrolls each month and are expected to do so through the end of 1986.

Overall, January produced mixed results for the state economy. Unemployment was up in the Tucson and Phoenix areas while six of the 13 remaining counties recorded a decrease in their unemployment rates. The service-producing sectors--especially retail trade and financial services--continued to create jobs and generally outperform expectations, while the goods-producing industries--mining, construction, and manufacturing--have struggled recently. The outlook suggests more of the same. Construction and manufacturing should continue to be relatively sluggish for several months, with most of the new jobs to be created in service-related businesses. Unemployment may rise gradually during the next few months, but the rate of job creation should be strong enough to result in declining unemployment before the year is over.

Brian Cary

Arizona Unemployment Insurance Activities - December 1985

	December 1985	November 1985	December 1984	% Change From One Year Ago
Arizona Claimants Served*	27,737	23,217	23,103	+20.1%
Arizona Average Weeks Unemployed**	8.5	9.1	9.0	+ 5.6%
Arizona Benefits Paid*	$ 8,990,469	$ 7,470,014	$ 6,965,410	+29.1%
Arizona Trust Fund Balance	$326,535,005	$332,981,234	$238,513,500	+36.9%

*All Programs
**UI Only

Improved Career Decision Making Seminars to be Sponsored by ASOICC

The Arizona State Occupational Information Coordinating Committee (ASOICC) will be sponsoring two Improved Career Decision Making (ICDM) seminars for counselors during the last week of June, 1986. The program trains counselors to help individuals make career decisions based on the best available labor market data and resources. In addition, the program is designed to promote greater cooperation between school counselors, colleges, job training programs, Job Service, vocational rehabilitation programs, and the producers and users of labor market information.

ICDM seminars have been scheduled as follows: for June 23 and 24 in Flagstaff, and for June 26 and 27 in Scottsdale. For additional information, contact Stan Butterworth, ASOICC director, at 255-3680.

Job Bank Wage Levels in Nonmetropolitan Counties

For several years, the Arizona Department of Economic Security's Research Administration has conducted and published the results of wage surveys for Maricopa and Pima counties. However, wage data for both nonmetropolitan counties and for cities in Arizona have been scarce. The DES Research Administration has finally been able to tap into an additional source of wage data--the DES Job Service Job Bank computer files.

The new report--1984 Job Bank Wage Levels (available in mid-April)--will contain information on wages offered by employers through DES Job Service local offices in every county and major city in Arizona. A publication with 1985 data will follow soon after.

The Job Service utilizes a computerized Job Bank data file which stores information on job orders, the wage amounts offered, and whether these job orders were filled by an applicant or applicants. This data file contains the wages offered by employers and whether the positions were filled, but it is not known whether these jobs were filled at the wage offered. However, by limiting the data retrieval procedure to openings with placements, it is more likely that the wages offered were the actual wages accepted.

In the published report, Job Bank wage data are presented by occupation for an area, with a low, high, and weighted average hourly wage from the filled job orders. The results reveal a wage structure in each area for jobs filled by the Job Service from December 1983 through December 1984. The occupations reported from these job orders are mostly those in basic employment positions of maintenance and production, service, and clerical. Quite a number of these job openings require minimal experience or education; thus, the Job Bank wage offers tend to be beginning wages. In addition, much of the employment available through these Job Service offices is of short duration.

What is considered by an employer in determining a wage offer is complex, while the factors affecting his/her business cause wages to fluctuate. For example, a business owner will take into account the supply and demand for various classes of workers, whether short-term or long-term, and when they are needed. Some employers may choose to initially pay higher than the going rate for certain occupations in order to maintain their employment levels. This higher wage would have an effect on other small businesses' wage levels. During times of high unemployment, businesses can be selective in their hiring practices and maintain low wage rates. On the other hand, an employer in a nonmetropolitan area may have to pay a higher wage in order to attract a worker with special skills. Employers' wage offers also reflect business cycles--prosperity or recession, as well as the profit situation of firms. Wage movements also apparently reflect changes in the U.S. Consumer Price Index, with approximately a one-half to full-year lag. Upward adjustments are usually lower than the inflation rates, however.

Many of the jobs in the smaller population areas are filled by word-of-mouth and by local owners and operators, as there are few private employment agencies in these areas. Also, many of the local businesses, including manufacturing firms, at least at their inception, do not have full-service personnel offices. The Job Service office fills that need with its job listing procedures, applicants, registration, and knowledge of the local area. Overall, in 1984, 10 percent of the job orders from the Job Bank in the nonmetropolitan counties accounted for nearly two-thirds of the job placements. The following list of occupations in the state accounted for over 60 percent of the number of job placements for the year of 1984 in the small counties: building maintenance repairer, construction worker, cook, counter attendant, custodial worker, fruit harvest worker, general clerk, kitchen helper, maid, material handler, and sales clerk. The wage levels of these occupations, in addition to indicating the type and frequency of job openings, will be somewhat reflective of the local labor force's socio-economic composition. Comparisons over time may indicate changes occurring in that labor force.

In addition to stating entry-level or short duration wage rates for certain types of employment, these data reflect the weights of certain occupations and groups of jobs within an area's labor force. These data of filled jobs may indicate demand occupations in the year of 1984, as well as their associated industries. A large number of food service filled openings in a community, for example, might indicate a strength or growth of the food service industry. These openings could be short-term or long-term employment. A new large motel in a town may also raise wage rates for maids and hotel/motel desk clerks. A job order in a rural area requesting a large number of material handlers or security guards may require higher wage levels in order to draw the necessary number of job seekers.

Much of the labor force activity in the small counties is seasonal, and that situation has a much larger impact on these rural areas' economies than those in the metropolitan counties of Maricopa and Pima. Both tourism and the retirement populations swell and diminish with the change of weather, affecting principally employment in the trade and service industries. Increased activity in these industries generally occurs in the northern counties of Arizona in the summer and in the southern counties in the winter. A growing population base, as in Coconino, Yavapai, and Mohave counties, will also create higher employment in other industries. A change of one hundred in a small county's or city's employment ranks has a large effect on that area's economy. The arrival of the citrus harvest period swells Yuma County's employment and labor force numbers. The chili picking season in Cochise County adds hundreds of workers to its manufacturing industry from July through October. Government employment, particularly in Apache, Coconino, Graham, Navajo, and Pinal counties drops by the hundreds in June as schools close. Employment numbers increase significantly in motels, restaurants and bars, service stations, and food retailers when the horse track in Prescott opens and as cool, clear skies arrive in the northern counties.

With these changes and associated increases and decreases of certain kinds of employment, much of it seasonal or short-term, a low wage structure often results. Contributing also to these lower wage levels is the mobility and migratory nature of the labor force itself. Many people opt for a small area lifestyle and its lower money requirements for its standard of living. Usually, it does not cost as much to live in a rural city or county. Many employees, some in retirement and some transitory, are willing to work for less. These are workers who seek, or have little choice but to take, employment in occupations below their skill or educational level.

Economic planners, developers, employers, and entrepreneurs may wish to study these occupational groups and their wage levels in the respective areas in regard to movement, enlargement, or introduction of new business enterprises in a small community. These statistics are indicative of an area's labor force composition of trainable, entry-level workers, its occupational makeup, and wage levels. Comparisons can also be made between various areas with respect to their labor force composition, occupational strengths, changes, availabilities, and average wage rates.

Glede Kohler

1984 Weighted Average Wage Rates for Selected Job Service Occupations
in Nonmetropolitan Counties

	Cochise	Coconino	Mohave	Pinal	Yavapai	Yuma
Cook	$3.80	$3.99	$4.31	$4.26	$4.03	$4.14
Counter Attendant	3.35	3.35	3.67	3.35	3.36	-
Kitchen Helper	3.42	3.42	3.36	3.44	3.37	3.35
Maid	-	3.54	3.63	4.00	3.60	3.37
Building Maintenance Repairer	3.89	4.26	4.42	-	3.88	4.54
Construction Worker	4.14	4.72	4.54	3.93	4.44	4.22
Custodial Worker	3.70	3.55	3.75	3.39	3.64	3.75
Groundskeeper	5.96	3.53	3.51	4.12	3.37	3.74
Material Handler	3.76	4.66	4.47	4.59	4.59	4.11
Security Guard	-	3.48	3.99	3.35	3.79	5.72
Cashier II	3.57	4.10	3.48	3.57	3.65	3.53
General Clerk	4.01	3.52	4.19	4.24	3.65	3.66
Sales Clerk	3.42	3.62	3.67	-	3.49	4.00

SOURCE: Arizona Department of Economic Security, Research Administration, Economic Analysis Section.

New Developments

"New Developments" is featured each month as a service to employers and job seekers. It is a compilation of public announcements of the more significant new construction, grand openings, major hirings and layoffs, and other employer events that have special significance for Arizona labor markets. The announcements are paraphrased and otherwise edited from articles published in newspapers and other periodicals from throughout the state. "New Developments" are limited to space available, and no attempt is made to compile an exhaustive list of all such events that have occurred during the month.

Manufacturing - A 60,000 square-foot building which sat vacant since 1980 in the tiny town of Naco, Sonora (just south of Bisbee on the Mexico side) will now be used as a venetian blinds manufacturing plant by Industrias Tres Estados, formerly Pintermex, which had been in the business of making electronic components in Agua Prieta for 11 years. Now that they have received a contract from Levolor, Bob Gain, operations manager of the firm, based in San Diego, estimates that they will ultimately employ 800 men and women in Naco, a town of 6,000 residents. Work on the contract had been going on already, and in the past three months some 340 people have been assembling blinds at three locations around Agua Prieta. However, the company decided they needed a larger facility and lots of industrious hands for assembly work. "We picked Naco primarily for the reason that it already had a facility and needed little to make it usable," Gain said. "Secondly, Naco has somewhat of a captive work force--an almost untapped work force. In Naco, we're hoping to reduce personnel turnover. In Agua Prieta, the turnover of personnel is horrendous." Now instead of worrying about extinction, the border town of Naco is anticipating a boom.

Construction -A groundbreaking ceremony was held at the end of February on the site of the permanent Arizona State University (ASU) West campus which will be built on the 300 acres between 43rd and 51st avenues and Sweetwater and Thunderbird roads in northwest Phoenix. According to Dr. Gerald McSheffrey, vice president of ASU West, phase I of the campus will cost $83 million and will consist of a library and a number of administrative and classroom buildings--all totalling 369,000 square feet. The library will be the campus centerpiece at 80,000 square feet, and will be the first building constructed, beginning in September, once utility lines and tunnels are in place. Plans call for phase I of the university to open in 1988 with the resources to serve 12,000 part-time or 5,000 full-time students.

Courses at ASU West will be strictly upper-level and graduate-level, and most courses will be offered during evening hours for the convenience of working students. Possible degree programs at the university will include business, education, engineering and applied sciences, fine arts, liberal arts, nursing, social work, and public programs such as journalism, communication, justice studies, and recreation.

No time frame estimates were given on phase II of ASU West, but in the future, builders will add another 379,000 square feet of space at a cost of $87 million to finish up the campus, according to Dr. McSheffrey.

Construction has begun on Del E. Webb Corporation's corporate headquarters at the Camelback Esplanade. Webb will occupy 65,000 square feet on the top two and one-half floors and ground floor of the 11-story Del Webb Building, located east of the future Ritz-Carlton Hotel and fronting on Camelback Road. Camelback Esplanade is a $400 million mixed-use project being developed by the Symington Company on 22.5 acres at the southeast corner of 24th Street and Camelback Road.

Ground was broken on Crossroads Festival, a 25-acre mixed-use project located at the northeast corner of Grant and Swan roads in Tucson. The $35 million project is composed of 160,000 square feet of retail space and a 200,000 square-foot, three-story office building. Crossroads Festival will be completed in three phases.

Johnson Carlier has begun construction on a 110,000 square-foot shopping center, Cobblestone Court, at Warner and McClintock roads in Tempe. The $8 million project will feature Southwestern design with tile roofs, and outdoor walkways will utilize turn-of-the-century style copper lamp posts. Plans call for extensive use of cobblestone paving for roads and walkways. Phase I is scheduled for completion in April. Phase II, Cobblestone Court South, is scheduled to break ground in March and will consist of 22,050 square feet.

Work has begun on The Plaza, an office complex in the Roosevelt Historic District at Roosevelt and Fourth Avenue. The $800,000 project consists of three two-story buildings with a total of 14,000 square feet of leasable space. One of the structures in the complex is the Stenlake Building, built in 1897, which was moved, brick by brick, from its original location several blocks south of Roosevelt on Fourth Avenue. All of the original doors, windows, stairwells, bricks, and trim will be used in the Stenlake Building reconstruction. The other two buildings were designed to match the restored building. Each of the new structures will have 5,000 square feet of leasable space. The building shells are scheduled to be ready for tenant improvements by August.

A 67-acre industrial development site at the northwestern corner of McDowell and Greenfield roads in Mesa has been purchased by Glen Rudel of Rudel Development Corporation of Arizona. The $6.7 million parcel will be developed into an office and industrial center for the east Valley. It is located opposite and adjacent to the Falcon Field Airport area. Rudel Development plans to start the first phase of the development this spring by constructing a 65,000 square-foot office industrial building. The company will sell fully improved sites at the property to developers and manufacturing, service, and distribution companies.

The new corporate headquarters for Big 4 Restaurants, a development by DMB Associates, is under construction at the southeast corner of Thomas Road and 26th Street in Phoenix. The two-story building will feature 32,000 square feet of space including 24,000 square feet of office space available for lease. The building will feature a prominent base wrapped in decorative tile supporting the second level which will house the Big 4 corporate office. An interior atrium is paved in marble, complementing the two-story-high vaulted ceiling with neon accent lighting. Designed in a triangular shape with a carved radius at the 26th Street and Thomas corner, the building will have 32 covered parking spaces and a guest parking court leading to a tiled entry colonnade and courtyard.

A $19 million, 225,000 square-foot facility nearing completion at 59th Avenue and Union Hills Road in Glendale will be leased by Sperry Corporation as headquarters for its Space Systems Division. Sperry expects to begin occupying the new building in May. The building is being built on a 55-acre parcel of the Arrowhead Ranch Development by McCarthy Construction Company of Phoenix. The site will accommodate planned growth to 500,000 square feet during the next decade, according to Sperry, which anticipates its Space Systems Division to see a sixfold sales increase by the mid-1990s.

Homes & Son Construction recently broke ground on Thunderbird Gardens, a $27 million congregate living project for senior adults at 5401 West Dailey Street in Glendale. The 300,000 square-foot, multiservice retirement complex will consist of 348 studios, one-, and two-bedroom apartments in 14 interconnected three-story buildings on a nine-acre site. The complex will offer recreational and support services, including a dining room, beauty and barber shop, soda fountain, gift shop, library, craft rooms, pool, and spa.

Construction has begun on a $9 million office building at 333 East Wetmore Road in Tucson for BetaWest Properties of Denver. The 146,000 square-foot project is situated on 10 acres of the 40-acre Tucson Place being developed by Forest City Rental Properties. The building will be constructed of cast-in-place concrete with an exterior of light beige Dryvit and emerald green insulating reflective glass. Parking for 734 vehicles will be provided in an on-grade lot adjacent to the building.

Del E. Webb Commercial Properties Corporation and the Adams Group have signed a joint-venture agreement to develop The Foothills, a 4,100-acre planned community south of South Mountain. The partners said that they will build the major streets, put in utilities, and then resell the land to developers for residential, retail, commercial, industrial, and recreational projects. The planned community, with land sales phased over seven years, will be worth more than $1 billion upon completion, the partners said. The development will include as many as 12,000 homes, two 18-hole championship golf courses, a 600-room resort, an industrial park, with retail and office space, according to a master plan approved by the Phoenix City Council last year.

The Foothills is the largest contiguous parcel to win approval for a mixed-use development in Phoenix's history. The site, formerly an International Harvester testing ground, is bordered by South Mountain Park, Pecos Road, 24th Street, and Seventh Avenue.

Ground breaking for Glen-Harbor, a $227.7 million industrial park near the new Glendale Airport, was tentatively planned for early March. The mixed-use development proposed for 416 acres north of Glendale Avenue at 107th Avenue is a key component of Glendale's economic development plan. It is expected to boost significantly the city's tax base and generate thousands of temporary construction jobs as well as 5,290 permanent jobs over six years. "Everything seems to be going in the right direction," Ray Jacobs, a Glendale planner, said last week. "I don't think we have any problems at the moment."

A video advertisement of Glen-Harbor has been prepared for prospective tenants, and copies of it are being sent to 750 companies in the U.S.

About 115 acres of the development site have been tentatively identified for a major tenant or tenants, 153 acres for business and light manufacturing, and 56 acres for office space. An additional 24 acres are set for such commercial uses as restaurants, office-supply stores, or athletic clubs, and 12 acres are planned for a hotel in the 250- to 350-room range.

Construction has begun on Scottsdale Foothills, a 330-unit apartment community located on the southeast corner of Raintree and 92nd Street near the Scottsdale Industrial Airpark. The $20 million complex, which will feature an adobe architectural design, will consist of 168 one-bedroom and 162 two-bedroom units. According to Foothills representatives, Scottsdale Foothills' July completion is scheduled to coincide with the dedication of Scottsdale's new PGA golf course, site of the 1987 Phoenix Open.

A $22 million office complex is planned for the square block bounded by Seventh and Fifth streets from Mulberry to Flower streets. Can-Alta Properties Ltd., a Canadian development company that has owned part of the property for several years, will build a 166,000 square-foot complex on the site, which is one block south of Osborn Road and across from the Phoenix Country Club.

Supereast Partnership of Scottsdale has received approval from the Mesa City Council for a $25 million specialty shopping center, Mesa Galleria. Planned for a 20-acre site at the northeast corner of Broadway and Power roads in Mesa, the project is expected to be developed in three phases over five years. In addition to retail space, the first phase of contruction will include four commercial buildings valued at about $8 million. A hotel and retirement apartments are planned for future phases of development. Phase I is expected to be completed by fall.

Koll Construction has been selected as general contractor and construction manager for a 110-acre business park to be built in Mesa. Called The Commons at Country Green Business Park, the $250 million development will add 1.8 million square feet of commercial space. The focal point of the eight-phase business park will be an existing Early American red brick mansion. Phase I construction will begin in March, with tenant occupancy scheduled for the summer of 1987. The first phase will include office and industrial buildings totalling 131,000 square feet. Buildout of the project, located at 4042 East Palm Street, is expected to come in 1995.

Ground was broken on Glendale Community College's new high tech center, a $2.2 million project being built behind the library on the campus located at 6000 West Olive in Glendale. The 31,250 square-foot facility is surrounded by seven-foot-high glass walls and features a 9,000 square-foot "pit" in the center of the room which will ultimately contain 336 microcomputers/terminals. The high tech center also boasts its own, full-blown industrial television studio. According to Dr. Larry Christiansen, dean of Administrative Services, the center will be completed in December, 1986 and will be available for all students enrolled in such high tech delivery courses as word processing, "office of the future," CAD center, robotics, and electronics.

A group of community leaders in Nogales, the Nogales Tourist Center Associates (NTCA), is pressing the city council to grant them a long-term lease on a ten-acre parcel they are eyeing for a 10-story hotel and convention center for Nogales right on the border of Mexico. Spokesman for the NTCA, Victor Fontes, says, "This will be a magnet for the Arizona tourist coming to the Mexican border." He also stated that, "We have two developers very much interested in the idea of a tourist center in Nogales, and the price tag will be around $25 million as an average." Plans for construction include a 200-room hotel, an auditorium/convention center and plaza, the Old Customs Building, a future cultural center, an open-air amphitheater, and also, according to Mr. Fontes, "very much needed parking" for up to 900 cars.

Relocation - Talley Industries Incorporated will move a subsidiary that manufactures aircraft ejection seats, Stencel Aero Engineering Corporation of Arden, North Carolina to Phoenix this spring. About half of Stencel's current 120 employees will be offered positions in Phoenix, where the company will share space with the 105 employees of Universal Propulsion Company Incorporated, another Talley subsidiary, located in a 60,000 square-foot plant at North Central Avenue and Happy Valley Road. A 25,000 square-foot addition is being added to the facility and is to be completed by June at a cost of about $300,000 according to Harold Watson, president and general manager of Universal. The move from North Carolina will begin about mid-April.

Expansion - A series of expansions was announced by the Garrett Pneumatic Systems Division, based in Tempe. The expansion is not in anticipation of any specific growth in the work force, but the current 2,300 employees will be increased by about 200 by midyear, according to the announcement. No cost of the expansion program was revealed by the company.

Layoffs - Due to a slowdown in demand for copper cable, American Telephone & Telegraph Company (AT&T) announced in the first week of February that 220 workers at the Phoenix Works plant had lost their jobs. The Phoenix Works, which makes copper communications cable, wiring, and telephone cords for AT&T Network Systems, employs more than 2,700 people in Phoenix, About 1,000 were hired between mid-1984 and mid-1985, when AT&T closed a Baltimore plant and consolidated the manufacture of all cord and most copper cable in Phoenix.

Arizona Labor Market Newsletter
LABOR MARKET INFORMATION PUBLICATIONS
Site Code 733A
P.O. Box 6123
Phoenix, Arizona 85005

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4/2/86 50465-1

ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. X No. 4
April 1986

Unemployment Rate

Seasonally Adjusted
February*

ARIZONA	6.5%
Maricopa Co.	5.3%
Pima Co.	5.2%
UNITED STATES	7.3%

Consumer Price Index

National-February
1967 - Base Year

Wage Earner/Clerical
Worker - 323.2
% Chg. Yr. Ago 3.0

All Urban - 327.5
% Chg. Yr. Ago 3.2

Phoenix-4th Qtr.
1977 - Base Year

All Urban - 191.5
% Chg. Yr. Ago 3.9

Tucson-4th Qtr.
1st Qtr. 1983 - Base Qtr.

All Urban - 115.0
% Chg. Yr. Ago 5.1

* Preliminary

Performance Standards:
Management Control for Job Training Partnership Programs

Over the years, there have been many employment assistance programs. They have evolved from Wagner-Peyser Act programs of Job Service and Unemployment Insurance to Manpower Development and Training Act (MDTA) to Comprehensive Employment and Training Act (CETA) and now Job Training Partnership Act (JTPA) programs. Throughout the evolution of these federal/state cooperatively administered programs, there has been a desire for objective measures to gauge their success. Even more importantly, there has been a need for measuring the success of programs as administered in one region relative to those administered in another. That task has been confounded by the differences in economies and the varying client mixes of each administrative area.

At last, under JTPA, an evaluation method has been conceived that can deal with those differences. It is a method enabling modification to values of standards depending upon the differences in client characteristics and upon differences in economic circumstances. The performance standards are comprised of seven measures, four for adults and three for youth. They include:

Adult Measures

- Entered Employment Rate--the number of adults who entered employment at termination as a percentage of the total number of adults who terminated.

Arizona Department of Economic Security

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Arizona Labor Market Information Newsletter
WINNER OF THE ICESA 1985 LMI PUBLICATION AWARD

Nancy Augustin, editor
Processed by RA Clerical Support Unit

- Welfare Entered Employment Rate--the number of adult welfare recipients who entered employment at termination as a percentage of the total number of adult welfare recipients who terminated.

- Average Wage at Placement--average hourly wage for all adults who entered employment at the time of termination.

- Cost per Entered Employment--total expenditures for adults divided by the number of adults who entered employment.

Youth Measures

- Entered Employment Rate--the number of youth who entered employment as a percentage of the number of youth who terminated.

- Positive Termination Rate--the number of youth who had a positive termination as a percentage of all youth who terminated. Positive terminations include entered employment, obtained employability enhancements, or attained Private Industry Council (PIC) approved youth competencies.

- Cost per Positive Termination--the total expenditures for youth divided by the number of youth who had a positive termination.

These measures are not unlike previous performance standards used under CETA. Even the Job Service has used placement rates (entered employment rates) as one measure of its success for many years. What is different under JTPA is the way values for the standards are modified to account for different client and economic circumstances of different administrative units. The method for determining appropriate adjustments allowing for these differences is statistical modeling and multiple regression analysis. Without getting into a technical discussion of these statistical procedures, suffice it to say that allowed modifications to standards are based on the historically known performance of employment and training programs, and statistically determined effects on performance standards of varying client populations and economic conditions.

For example, intuition suggests it might be more difficult for one program to have a high entered employment rate at termination of the program if it trained more high school dropouts than did another. National experience has verified this is so, and statistical analysis of data from programs around the country has determined how much of a difference (on average) it makes.

Other characteristics also make a difference, and some characteristics influence some standards more than others. Length of training, not surprisingly, has a significant effect on cost per entered employment either for adults or youth. Therefore, this program characteristic is taken into account in setting placement cost standards.

Some factors, when applied in a model, had effects counter to expectations from common sense. Serving a greater proportion of youth with limited English speaking ability, for instance, did not increase the cost of positive termination or decrease the percent entering employment. Because these effects could not be attributed to limited English proficiency, probably because of statistical problems in distinguishing the effects of limited English proficiency from the effects of various ethnic groups, it was excluded from the youth models.

Exclusions of some other factors were made for a number of other reasons. The factor of "services to heads of households" was excluded because its effects were "colinear" (moved in the same direction and magnitude) to other factors in the adult models. Students were excluded from adult models, and unemployment compensation claimants were excluded from youth models because there were too few of these groups in the sample. A youth unemployment rate could not be included in the youth models because youth unemployment rates (other than census-shared rates) are unavailable at the substate level.

A final list of factors for each performance standard was selected and included on worksheets for use by JTPA Service Delivery Area (SDA) administrators. The lists were expanded for program year (PY) 1986 to include the additional economic factors of "percent of families below poverty level" and "population density." Formerly the only economic factors used were the unemployment rate and the average wage for the area. Client characteristic factors composed the bulk of the performance standard adjustment factors. The longest list was associated with the adult entered employment rate and included:

Percent Female;
Percent 55 years old and over;
Percent Black;
Percent Hispanic;
Percent American Indian/Alaskian Native;
Percent Asian/Pacific Islander;
Percent Dropout;
Percent Handicapped;
Percent Unemployment Compensation (UC) Claimant; and
Percent Welfare Recipient.

The worksheets for each performance standard have two columns of values provided to enable SDAs to compute their own standards. (See example on page 4.) There is a column of national average values and a column of model-determined adjustment weights for each factor. It is only necessary that the SDAs insert their own client characteristics and economic factor values, compute the difference from the national averages, multiply these by the weights given, total the results, and add the total to the national departure point value to determine their expected performance standard. That may seem like a complex procedure to some, but it is easily accomplished with a hand calculator, or easier still, with a microcomputer with spreadsheet software.

Performance Monitoring and Improvement

A significant advantage for SDAs in working with performance standard worksheets or spreadsheets is being able to use them to keep track of how the SDA is doing and to develop strategies for improving performance. The National Alliance of Business (NAB) has prepared a booklet explaining the process. It is called Measuring-up: Planning and Managing with Performance Standards. In it, NAB explains there are two approaches. One is the "Oversight Response" option that helps to pinpoint factors in existing programs and systems which are causing performance problems. The second is the "Planning Response" option which helps identify new strategies for improving performance. Steps in the oversight response are to:

Step 1: Identify specific performance measures needing improvement through the Performance Status Report. (A special worksheet compares actual to expected performance.)

Step 2: Identify programs, contractors, or problems with target groups which may be causing poor performance. (A series of worksheets helps to target specific programs, contractors, and direct characteristics causing problems.)

Step 3: Identify probable systems causing poor performance either within the program or contractor, or throughout the entire program using the Oversight Response Summary. (Another worksheet lays out service and program components against standards likely to be influenced.)

Step 4: Use the Systems Summaries to conduct a review of each area identified above. (System Summaries break down each service into "areas to be reviewed" and "method of review.")

Step 5: Design, implement, and follow-up on corrective action recommendations.

The planning response option (or replanning) is used in addition to the oversight response. It helps in initiating new policies with respect to:

who will be served;
what services and programs will be provided; and
what will be acceptable peformance standards.

(A table is provided that identifies which client characteristics raise or lower what standard and which raise or lower the cost per entered adult employment and cost per positive youth termination.) See page 5.

Measuring-up can be obtained for $13.95 per copy from the:

National Alliance of Business
1015 15th Street, N.W.
Washington, D.C. 20005
Telephone: (202) 457-0040

Issues and the Arizona Experience

Despite the relatively mechanical nature of applying and model adjusting performance standards for each SDA, there are some circumstances that make application as much

PY 86 JTPA Performance Standards Worksheet

A. Service Delivery Area's Name: YUMA COUNTY

B. SDA Number:

C. Performance Period: PY 86

D. Type of Standard: [x] Plan [ ] Recalculated

Date Calculated 3/17/86

E. Performance Measure: Entered Employment Rate (Adult)

F. LOCAL FACTORS	G. SDA FACTOR VALUES	H. NATIONAL AVERAGES	I. DIFFERENCE (G MINUS H)	J. WEIGHTS	K. EFFECT OF LOCAL FACTORS ON PERFORMANCE EXPECTATIONS, (I TIMES J)
1. % Female	71.2	52.8	18.4	− .063	- 1.16
2. % 55 years old and over	2.5	2.9	- .4	− .079	+ .03
3. % Black	9.9	23.8	-13.9	− .073	+ 1.01
4. % Hispanic	42.4	7.9	34.5	− .022	- .76
5. % Alaskan Native/American Indian	4.9	1.3	3.6	− .010	- .04
6. % Asian/Pacific Islander	0.8	2.4	- 1.6	− .008	+ .01
7. % Dropout	45.0	25.0	20.0	− .172	- 3.44
8. % Handicapped	4.8	9.1	- 4.3	− .128	+ .55
9. % UC Claimant	16.5	10.9	5.6	.014	+ .08
10. % Welfare Recipient	14.0	29.8	-15.8	− .252	+ 3.98
11. Average Wage for Area ($1000s)	14.0	16.9	- 2.9	− .653	+ 1.89
12. Unemployment Rate	14.9	8.0	6.9	− .717	- 4.95
13. % Families Below Poverty Level	12.3	9.4	2.9	− .223	- .65
14. Population Density (1000s/sq.m.)	0.0	0.6	- .6	.827	- .50

L. Total	- 3.92
M. NATIONAL DEPARTURE POINT	+ 62.40
N. Model-Adjusted Performance Level (L + M)	58.48%
O. Governor's Adjustment	0
P. SDA Performance Standard	58.48%

(12-16-85)

EFFECT OF CHANGING VARIABLES ON PERFORMANCE STANDARDS
(Listed in order of significance of impact)

Performance Standard	Raises Standards if increased	Lowers Standards if increased
Entered Employment Rate – Adult (The hierarchy of variables for Welfare Entered Employment Rate is the same as it is for Entered Employment Rate.)	1. Age 55 + 2. U. I. Claimant 3. Hispanic 4. Asian/Pacific Islander	1. Unemployment Rate* 2. Average Wage* 3. Female 4. Welfare 5. Handicapped 6. Dropout 7. Alaskan/American Indian 8. Black 9. Limited English Speaking
Average Wage at Placement – Adult	1. Average Wage* 2. Alaskan/American Indian 3. Age 55 + 4. U. I. Claimant 5. Asian/Pacific Islander 6. Limited English Speaking 7. Unemployment Rate*	1. Female 2. Dropout 3. Handicapped 4. Black 5. Hispanic 6. Welfare
Entered Employment Rate – Youth	1. High School Graduate 2. Dropout 3. Asian/Pacific Islander 4. Female	1. Unemployment Rate* 2. Age 14 – 15 3. Average Wage* 4. Single Head of Household 5. Alaskan/American Indian 6. Black 7. Welfare 8. Hispanic 9. Handicapped
Positive Termination Rate – Youth	1. Asian/Pacific Islander 2. Age 14 – 15 3. Female 4. Alaskan/American Indian 5. Handicapped	1. Unemployment Rate* 2. Average Wage* 3. Single Head of Household 4. Black 5. Welfare 6. Hispanic
Raising/lowering the cost standards below has different implications than raising/lowering the four standards listed above. Exceeding your standard for the two cost standards means actual performance lower than the standard.		
Cost Per Entered Employment – Adult	1. Average Wage* 2. Average Weeks Part. 3. Unemployment Rate* 4. U.I. Claimant 5. Handicapped 6. Female 7. Welfare 8. Black 9. Hispanic 10. Limited English Speaking	1. Age 55 + 2. Alaskan/American Indian 3. Dropout 4. Asian/Pacific Islander
Cost Per Positive Termination – Youth ***Not influenced by SDA**	1. Unemployment Rate* 2. Average Wage* 3. Average Weeks Part. 4. Single Head of Household 5. Handicapped 6. Welfare 7. Black 8. Hispanic	1. Alaskan/American Indian 2. Age 14 – 15 3. Female 4. Asian/Pacific Islander

SOURCE: Reproduced from Measuring-up by permission of the National Alliance of Business.

art as science. For example, an additional step at the end of each performance standard worksheet is a final adjustment that may be made at the discretion of the governor. The U.S. Department of Labor recognizes that there may be other factors than those accounted for in the model that are outside the management control of SDAs and which may affect performance. The governor's adjustment factor is permitted to take account of these outlying factors. For example, an SDA may choose to serve ex-offenders. No adjustment factor has been model-identified to account for service to ex-offenders. Therefore, the governor may make an add-factor adjustment.

The Labor Department recommends that these adjustments be within the tolerance limits it has determined are reasonable. Otherwise, the Department will back the governor on any appeal of sanctions to the Secretary of Labor if the procedures for adjusting performance standards are:

- responsive to the intent of the Act;
- consistently applied among SDAs;
- objective and equitable throughout the state; and
- in conformance with widely accepted statistical criteria.

In addition, source data must be:

- of public use and quality; and
- available upon request.

Results must be:

- documented clearly; and
- reproducible.

Adjustment factors must be limited to:

- economic factors;
- labor market conditions;
- characteristics of the population to be served;
- geographic factors; and
- types of services to be provided.

All of that seems clear enough on its face, but in actual practice there is wide latitude over which reasonable persons may differ. In Arizona there have been requests for adjustments, and a majority have been granted after the state received necessary documentation in support of the adjustment. Nevertheless, there is a need for a more regular procedure in accepting, evaluating, granting, and documenting requests for adjustments.

An issue that is usually settled based on the recommendation of the State Job Training Coordinating Council (SJTCC) is whether to apply current or a former year's performance standard values as the basis for the present year's evaluation for winning incentive awards or improving sanctions. So far, the SJTCC has elected to hold to previous year's standards rather than the current year's on the rationale that it is better for an SDA to know the standard to which it will be held before it plans programs and awards contracts. Although this approach has been acceptable to the U.S. Department of Labor, it is counter to the recommendation of its technical assistance Guide For Setting JTPA Title II-A Performance Standards. The Guide recommends using current year standards so that the SDAs may use the performance standards as tools of management control. Nevertheless the present policy may be maintained for at least another year because the Council does not believe all the state SDAs would now be able to understand and apply the Guide's methodology.

Some other issues before committees of the SJTCC have to do with urban and rural differences. More often than not, differences center on whether incentives for performance should be awarded based upon absolute numbers served, or upon relative numbers served. Of course, urban areas have an advantage with absolute numbers, while rural areas are more likely to win awards based on rates or relative numbers served. It is the Council's and the state's task to be equitable to both.

The Welfare to Work Incentive

Early in 1986, Governor Babbitt advanced an initiative to ensure that all available and appropriate resources of the state be used to put welfare recipients to work. Because JTPA also has "welfare to work" as one of its goals, the SJTCC responded with a challenge to the SDAs to make an even greater effort to serve welfare clients. Because the majority of welfare clients that can benefit most from JTPA services are those adults who recieve Aid to Families with Dependent Children (AFDC), the SJTCC elected to reward targeting them specifically. A Welfare to Work Ad Hoc Committee of the SJTCC proposed a plan, contigent on the governor's approval, to distribute carry-over incentive funds to those SDAs who served AFDC recipients from January 1 through June 30, 1986. In addition, it planned to:

1. Establish a ninth* performance standard to measure service to AFDC clients to be effective beginning July 1, 1986.

2. Limit receipt of ninth standard incentive awards to those SDAs exceeding 25 percent AFDC placement. (AFDC placement is defined as placement in unsubsidized employment for no less than 60 days.)

3. Award 30 percent of all available incentive funds based on the ninth performance standard.

In order to facilitate action by the SDAs yet this program year, the committee recommended permitting administrative revisions by Private Industry Councils (PICs) of their current year's Job Training Plans.

The foregoing actions now challenge the SDAs and the Job Training Partnership Administration of the Department of Economic Security to carry out the initiative. All parties concerned would be well served in using the management control tools of the performance standards methodology.

Ron Simon

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*An eighth performance standard, the first proposed by the council, provides incentive awards for targeting the "hard to serve." The hard to serve include welfare clients, dropouts, and others.

Growing Industries in Arizona

Thirty-one industries throughout Arizona have had growing employment levels from 1979 through 1985. A study of information from various sources, including Unemployment Insurance data, Current Employment Statistics data, and local periodicals, revealed the growing industries listed in the accompanying table. Also in the table are the counties in which those industries are growing.

These industries were determined to be growing by observing the changes in employment levels during a seven-year span, 1979 through 1985. That period of time was chosen in order to negate the effects of the business cycle. Any changes that have occurred in 1986 are not reflected in this study.

The industries that are growing in the greatest number of counties are medical and other health services, and miscellaneous retail trade. Maricopa County had the largest number of growing industries--25. However, every county except Graham had at least one growing industry.

The diversity of the growing industries, which include parts of all major employment sectors in Arizona except mining, is an indication of a healthy economy. Although the urban counties contain more growing industries, the rural counties have also experienced growth in some sectors during the seven-year period.

A list of the occupations with high employment levels that are associated with these industries as well as information on declining industries and occupations can be obtained by writing to the address on the back of the Newsletter or calling (602) 255-3871.

Barbara Keene

Growing Industries in Arizona

Industries / *Counties*	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz	Maricopa	Mohave	Navajo	Pima	Pinal	Santa Cruz	Yavapai	Yuma
Medical and Other Health Services		●	●			●		●	●		●	●		●	
Miscellaneous Retail Trade			●	●				●	●		●	●		●	●
Eating and Drinking Places (Retail Trade)		●		●				●	●		●			●	
Finance and Insurance			●					●	●		●			●	●
Food Stores (Retail Trade)		●	●					●		●	●				●
Wholesale Trade				●				●	●	●	●			●	
Business Services				●				●			●		●	●	
Communications and Public Utilities	●							●	●	●		●			
Printing and Publishing Manufacturing		●						●		●	●			●	
Repair Services			●					●	●	●	●				
Automotive Dealers and Service Stations (Retail Trade)	●						●	●	●						
Hotels and Other Lodging Places (Services)								●		●	●			●	
Real Estate	●							●			●				●
Building Construction								●			●	●			
Electrical Machinery Manufacturing								●			●		●		
General Contractors (Construction)											●	●		●	
Personal Services		●						●			●				
Transportation Equipment, & Other Durables Manufacturing								●			●		●		
Transportation, except Railroads			●					●	●						
Agricultural Services								●			●				
Amusement and Recreation Services								●				●			
Educational Services								●			●				
Fabricated Metals Manufacturing											●	●			
General Merchandise and Apparel (Retail Trade)		●							●						
Legal Services								●			●				
Machinery (except Electrical) Manufacturing		●									●				
Miscellaneous Services								●			●				
Special Trades (Construction)								●			●				
Chemicals and Allied Products Manufacturing								●							
Food Processing Manufacturing										●					
Stone, Clay, and Glass Manufacturing												●			

The Arizona Labor Force in February

Nationally, the largest jump in the unemployment rate since May 1980 was recorded in February. In Arizona, the unemployment rate rose only slightly as layoffs in construction and mining continued to be a drag on the economy. Strong population growth in the Phoenix and Tucson areas, coupled with the peak of winter tourism activity, were more than enough to keep overall job growth positive. But compared to the experience of one year ago, when 17,500 jobs were added to the local economy, February's performance of 13,900 jobs shows that the economy has cooled.

For the second time this year, Pima County recorded the lowest unemployment rate in the state. This is particularly impressive considering the dual problems of copper mining layoffs and loss of trade due to the devalued peso. But a strong manufacturing base, principally-defense related, coupled with an expansion of tourism business, has helped the local economy to prosper.

For over 12 months, manufacturing has been buffeted by the positive influence of increased defense purchases and the negative effect of semiconductor losses. The situation was no different in February as local high technology manufacturers either gained or lost employment depending on their area of specialization. Aerospace added 400 workers during the month while electronics lost 300. That situation may begin to change soon. Among electronics manufacturers, the much watched book-to-bill ratio has returned to a point where more orders are being received than are being shipped. While it is too soon to ring the bells and rejoice, it does appear that the situation is stabilizing and layoffs will begin to decline. But on the negative side, our dependence on defense expenditures could place us in jeopardy of losing jobs or not growing as quickly as would otherwise be true, if purchase plans are reduced. At this point, no definite strategies are known.

In copper mining, employment had been drifting downward slowly. But due to some major staffing reductions, another 400 copper miners lost their jobs in February. These losses were again in the state's rural areas where unemployment is high and comparable jobs are scarce. Considering that contract negotiations will begin soon (the existing contracts expire on June 30) the results of that bargaining will dictate how the industry will operate in the future. At this point, copper mines are operating with much less than half of the labor force they once employed.

Much of the economic news recently has been directed to falling interest rates. While that clearly has a positive impact on residential housing, its influence has not yet appeared in the employment figures. Construction employment has been falling since June 1985, and in February another 2,100 jobs were lost. The declines were pervasive throughout the industry and continue to reflect completed commercial and multi-family projects. During the next few months, construction employment is expected to expand as lower mortgage rates encourage more home building. But the overall impact on the industry is not expected to be startling.

The rest of Arizona's economy displayed expected seasonal activity. The expansion in government reflects schools reopening after the Christmas recess, while the loss of retail trade employment is the result of temporary jobs ending after the holiday season. Both were generally of the magnitude expected.

Finally in services, the strong employment growth of the last two years continued in February. Another 4,100 jobs were created in nearly every sector of the industry. Particularly strong growth was noted in tourist-related businesses, among tax preparers, and in various temporary help agencies.

Overall, February was a mixture of pluses and minuses. The unemployment rate is trending upward, but job growth remains strong in the Phoenix and Tucson areas. Manufacturing appears to be approaching a point of stability, particularly among the semiconductor firms; and if lower mortgage rates can reverse the slide in construction, 1986 holds the promise for a good year.

Dan Anderson

Arizona Labor Force and Employment

February 1986 (in thousands)

	ARIZONA				
				-- Amt Change --	
	Feb.* 1986	Jan. 1986	Feb. 1985	Jan. to Feb.	1985 to 1986
TOTAL CIVILIAN LABOR FORCE**	1526.7	1514.2	1463.7	+12.5	+63.0
Total Unemployment	99.1	97.7	88.8	+1.4	+10.3
Rate	6.5	6.5	6.1	---	---
Rate (Sea. Adj.)***	6.5	6.4	6.1	---	---
Total Employment	1427.6	1416.5	1374.9	+11.1	+52.7

The Above Labor Force Statistics Should Not

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	Feb.* 1986	Jan. 1986	Feb. 1985	Jan. to Feb.	1985 to 1986
TOTAL WAGE AND SALARY	1318.4	1304.5	1248.1	+13.9	+70.3
Manufacturing	181.1	181.2	178.5	-0.1	+2.6
Durable Goods	142.4	142.6	141.3	-0.2	+1.1
Stone, Clay and Glass	7.9	8.1	7.6	-0.2	+0.3
Primary and Fabricated Metals	16.7	16.9	17.0	-0.2	-0.3
Primary Metals	8.0	8.0	7.5	+0.0	+0.5
Fabricated Metals	8.7	8.9	9.5	-0.2	-0.8
Machinery	64.7	65.0	70.4	-0.3	-5.7
Other Durable Goods	53.1	52.6	46.3	+0.5	+6.8
Aircraft and Missiles	25.6	25.2	20.6	+0.4	+5.0
Lumber and Wood Products (Except Furniture)	7.5	7.6	6.9	-0.1	+0.6
All Other Durable Goods	20.0	19.8	18.8	+0.2	+1.2
Nondurable Goods	38.7	38.6	37.2	+0.1	+1.5
Food and Kindred Products	8.6	8.7	8.3	-0.1	+0.3
Apparel	5.1	5.1	4.8	+0.0	+0.3
Printing and Publishing	14.5	14.4	14.1	+0.1	+0.4
All Other Nondurable Goods	10.5	10.4	10.0	+0.1	+0.5
Mining and Quarrying	11.0	11.5	12.1	-0.5	-1.1
Copper Mining	8.6	9.0	9.5	-0.4	-0.9
Other Mining and Quarrying	2.4	2.5	2.6	-0.1	-0.2
Construction	107.7	109.8	104.6	-2.1	+3.1
Trans., Communications, and Public Utilities	64.2	63.6	62.0	+0.6	+2.2
Transportation	28.7	28.9	28.4	-0.2	+0.3
Communications and Public Utilities	35.5	34.7	33.6	+0.8	+1.9
Trade	329.9	330.1	304.1	-0.2	+25.8
Wholesale Trade	64.7	64.4	61.9	+0.3	+2.8
Retail Trade	265.2	265.7	242.2	-0.5	+23.0
General Merchandise and Apparel	40.5	42.5	39.3	-2.0	+1.2
Food Stores	40.1	40.0	37.0	+0.1	+3.1
Automotive and Service Stations	31.4	31.4	28.7	+0.0	+2.7
Eating and Drinking Places	98.3	96.6	86.3	+1.7	+12.0
Other Retail Trade	54.9	55.2	50.9	-0.3	+4.0
Finance, Insurance, and Real Estate	85.3	84.7	76.9	+0.6	+8.4
Services and Miscellaneous	309.8	305.7	287.8	+4.1	+22.0
Hotels and Other Lodging Places	31.5	30.7	29.6	+0.8	+1.9
Business Services	68.8	67.5	63.2	+1.3	+5.6
Health Services	76.4	75.9	72.2	+0.5	+4.2
Other Services	133.1	131.6	122.8	+1.5	+10.3
Government	229.4	217.9	222.1	+11.5	+7.3
Federal	41.0	40.9	39.5	+0.1	+1.5
State and Local	188.4	177.0	182.6	+11.4	+5.8
School	113.0	102.3	112.5	+10.7	+0.5

* Preliminary
** Labor force, unemployment, and employment are reported by place of residence.
*** Normal seasonal variations have been eliminated to reflect underlying economic trends.
NOTE--Prepared in cooperation with the U.S. Department of Labor,Bureau of Labor Statistics.

Arizona Labor Force and Employment

February 1986 (in thousands)

MARICOPA COUNTY					PIMA COUNTY				
			-- Amt Change --					-- Amt Change --	
Feb.* 1986	Jan. 1986	Feb. 1985	Jan. to Feb.	1985 to 1986	Feb.* 1986	Jan. 1986	Feb. 1985	Jan. to Feb.	1985 to 1986
947.1	941.3	906.2	+5.8	+40.9	301.4	298.5	288.6	+2.9	+12.8
50.0	50.2	42.4	-0.2	+7.6	15.8	15.7	15.6	+0.1	+0.2
5.3	5.3	4.7	---	---	5.2	5.3	5.4	---	---
5.3	5.3	4.7	---	---	5.2	5.2	5.3	---	---
897.1	891.1	863.8	+6.0	+33.3	285.6	282.8	273.0	+2.8	+12.6

e Used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

MARICOPA COUNTY					PIMA COUNTY				
Feb.* 1986	Jan. 1986	Feb. 1985	Jan. to Feb.	1985 to 1986	Feb.* 1986	Jan. 1986	Feb. 1985	Jan. to Feb.	1985 to 1986
868.7	859.8	821.3	+8.9	+47.4	240.5	238.1	227.1	+2.4	+13.4
129.2	129.2	130.5	+0.0	-1.3	32.7	32.6	29.9	+0.1	+2.8
102.8	102.9	104.7	-0.1	-1.9	27.5	27.5	25.0	+0.0	+2.5
4.9	5.1	4.7	-0.2	+0.2					
11.2	11.2	11.3	+0.0	-0.1					
50.8	51.2	56.7	-0.4	-5.9					
35.9	35.4	32.0	+0.5	+3.9					
26.4	26.3	25.8	+0.1	+0.6	5.2	5.1	4.9	+0.1	+0.3
5.5	5.6	5.5	-0.1	+0.0					
3.2	3.2	2.9	+0.0	+0.3					
10.5	10.4	10.4	+0.1	+0.1					
7.2	7.1	7.0	+0.1	+0.2					
0.6	0.6	0.6	+0.0	+0.0	2.1	2.1	2.5	+0.0	-0.4
75.3	76.6	74.5	-1.3	+0.8	20.9	21.5	19.4	-0.6	+1.5
41.9	41.8	40.1	+0.1	+1.8	9.1	9.1	9.2	+0.0	-0.1
19.7	19.7	19.3	+0.0	+0.4	4.2	4.2	4.3	+0.0	-0.1
22.2	22.1	20.8	+0.1	+1.4	4.9	4.9	4.9	+0.0	+0.0
227.1	227.2	207.7	-0.1	+19.4	53.8	54.1	50.4	-0.3	+3.4
51.4	51.0	48.9	+0.4	+2.5	7.4	7.5	7.2	-0.1	+0.2
175.7	176.2	158.8	-0.5	+16.9	46.4	46.6	43.2	-0.2	+3.2
26.2	27.6	25.1	-1.4	+1.1	7.0	7.4	7.4	-0.4	-0.4
26.1	26.0	23.8	+0.1	+2.3	6.5	6.5	5.9	+0.0	+0.6
20.0	20.0	18.3	+0.0	+1.7	5.4	5.4	4.6	+0.0	+0.8
65.4	64.3	56.5	+1.1	+8.9	18.0	17.8	16.3	+0.2	+1.7
38.0	38.3	35.1	-0.3	+2.9	9.5	9.5	9.0	+0.0	+0.5
67.1	66.5	60.4	+0.6	+6.7	12.0	12.0	10.8	+0.0	+1.2
211.2	207.7	196.1	+3.5	+15.1	58.8	58.2	54.3	+0.6	+4.5
18.4	17.9	18.2	+0.5	+0.2	5.7	5.5	4.9	+0.2	+0.8
56.2	55.1	51.9	+1.1	+4.3	10.0	9.9	8.9	+0.1	+1.1
51.0	50.5	48.0	+0.5	+3.0	16.1	16.0	15.3	+0.1	+0.8
85.6	84.2	78.0	+1.4	+7.6	27.0	26.8	25.2	+0.2	+1.8
116.3	110.2	111.4	+6.1	+4.9	51.1	48.5	50.6	+2.6	+0.5

-- Prepared by Labor Market Information, Research and Analysis (CPS, 1/86)

Nonmetropolitan Counties
Labor Force and Employment
February 1986

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL CIVILIAN LABOR FORCE*	15,350	35,500	38,275	11,825	7,875	2,950	4,575
Total Unemployment	3,000	2,975	3,775	1,975	850	300	825
Rate	19.5%	8.4%	9.9%	16.7%	10.8%	10.2%	18.0%
Rate (Seas. Adj.)**	19.1%	8.1%	9.5%	16.4%	10.9%	9.5%	-INA-
Total Employment	12,350	32,525	34,500	9,850	7,025	2,650	3,750

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL WAGE AND SALARY	14,025	24,575	34,150	9,325	4,850	2,800	2,625
Manufacturing	725	1,975	2,650	1,300	175	50	75
Mining and Quarrying	25	125	25	1,075	0	1,675	0
Construction	875	1,300	1,525	400	125	100	150
Trans., Comm., & Pub. Util.	1,675	1,750	3,100	375	175	50	50
Trade	1,450	5,375	7,675	1,850	1,300	275	850
Fin., Insur., & Real Estate	225	650	725	250	125	25	100
Services and Miscellaneous	3,700	3,575	7,575	1,600	850	75	625
Government	5,350	9,825	10,875	2,475	2,100	550	775

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL CIVILIAN LABOR FORCE*	26,725	25,675	33,900	9,025	32,275	34,350
Total Unemployment	3,050	4,075	4,275	975	2,450	4,750
Rate	11.4%	15.9%	12.6%	10.8%	7.6%	13.8%
Rate (Seas. Adj.)**	10.8%	15.1%	12.9%	12.2%	7.0%	-INA-
Total Employment	23,675	21,600	29,625	8,050	29,825	29,600

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL WAGE AND SALARY	17,950	18,925	25,850	8,400	21,150	24,475
Manufacturing	2,300	1,700	3,125	1,050	2,200	1,850
Mining and Quarrying	275	1,125	3,400	0	550	50
Construction	1,175	1,000	1,175	325	1,950	1,450
Trans., Comm., & Pub. Util.	1,075	1,525	925	525	975	950
Trade	5,075	3,600	4,950	3,500	5,375	7,775
Fin., Insur., & Real Estate	900	350	700	250	850	950
Services and Miscellaneous	3,700	4,925	2,825	1,250	4,450	4,625
Government	3,450	4,700	8,750	1,500	4,800	6,825

*Adjusted to the Current Population Survey (CPS) to reflect place of residence.
**Seasonal adjustment not applicable for economic assistance programs.

NOTE--Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs
February 1986

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,530,989	1,431,218	99,771	6.5%
Apache	15,384	12,369	3,015	19.6
Cochise	35,176	32,200	2,976	8.5
Coconino	38,460	34,659	3,801	9.9
Gila	11,860	9,871	1,989	16.8
Graham	7,914	7,043	871	11.0
Greenlee	2,963	2,668	295	10.0
La Paz	4,594	3,756	838	18.2
Maricopa	951,527	901,165	50,362	5.3
Mohave	26,817	23,752	3,065	11.4
Navajo	25,780	21,663	4,117	16.0
Pima	300,852	284,912	15,940	5.3
Pinal	34,066	29,749	4,317	12.7
Santa Cruz	9,068	8,092	976	10.8
Yavapai	32,091	29,644	2,447	7.6
Yuma	34,437	29,675	4,762	13.8

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators. Note: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Estimated Hours and Earnings of Production Workers in Selected Industries in Arizona
February 1986

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVG. HOURLY EARNINGS		
	FEB.* 1986	JAN. 1986	FEB. 1985	FEB.* 1986	JAN. 1986	FEB. 1985	FEB.* 1986	JAN. 1986	FEB. 1985
FOR THE STATE OF ARIZONA*									
Manufacturing	394.68	391.68	381.48	40.9	40.8	40.8	9.65	9.60	9.35
Aircraft & Missiles	INA	INA	INA	INA	INA	INA	INA	INA	INA
Food & Kindred Products	368.60	389.34	320.00	40.5	42.0	39.9	9.09	9.27	8.02
Primary Metals	546.34	509.31	494.32	41.1	40.2	39.8	13.28	12.66	12.42
Machinery	341.38	334.80	327.54	38.4	37.2	38.9	8.89	9.00	8.42
Copper Mining	566.71	553.62	568.82	40.8	39.8	41.1	13.89	13.91	13.84
Construction	431.55	437.63	428.79	35.2	36.9	36.4	12.26	11.86	11.78
Utilities	586.57	595.52	553.76	43.1	43.5	43.5	13.60	13.69	12.73
Retail Trade**	232.17	231.40	226.61	32.7	32.5	32.7	7.10	7.12	6.93
Wholesale Trade	377.53	374.10	368.34	39.7	39.4	40.3	9.50	9.49	9.14

* Preliminary

** Excludes eating and drinking places.

NOTE--These estimates are based on a sample of full and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

--Prepared by Labor Market Information, Research and Analysis (1972 SIC, 1/86)

Arizona Unemployment Insurance Activities - January 1986

	January 1986	December 1985	January 1985	% Change From 1 Year Ago
Arizona Claimants Served*	33,338	27,737	25,908	+28.7%
Arizona Average Weeks Unemployed**	8.2	8.5	8.5	- 3.5%
Arizona Benefits Paid*	10,767,507	8,990,469	8,954,292	+20.2%
Arizona Trust Fund Balance	$326,009,229	$326,535,005	$246,312,654	+32.4%

*All Programs **UI Only

New Labor Market Information (LMI) Publications Now Available

The 1985 Maricopa County Small Employer Wage Survey, an annual publication, is now available upon request. This survey gathers and reports wages paid to workers of private firms with 99 or fewer employees in Maricopa County in August 1985. The publication includes wages for occupations by industrial groups with a wage analysis.

Also released this month is the Maricopa County Employer Wage Survey, a wages-paid report to those employees of the larger firms in the county in August 1985, and the Pima County Small Employer Wage Survey for 1985.

Another publication, 1984 Job Bank Wage Levels gives, for the first time, wage rates offered by employers to job placements through the Department of Economic Security's job bank. This 65 page report states low, weighted average, and high wage levels for over 200 occupations in all of the Arizona counties and 25 cities. As these employment positions represent a greater portion of entry-level jobs, new entrants into the labor force, training program administrators, and training completers should find this publication especially useful.

Also recently released is the 1986 update of the Arizona Occupational Employment Forecasts. Available for each county in Arizona, these publications provide estimates of current and projected employment and demand for nearly 700 occupations. Data presented are based on a survey conducted by the Occupational Employment Statistics (OES) Unit of the Research Administration in Cooperation with the U.S. Department of Labor. During the three-year program cycle most recently completed, nearly 16,000 firms with more than 800,000 employees were successfully surveyed--yielding a response rate of 85 percent.

The above reports can be obtained by writing to the address on the back of this Newsletter or by calling (602) 255-3871.

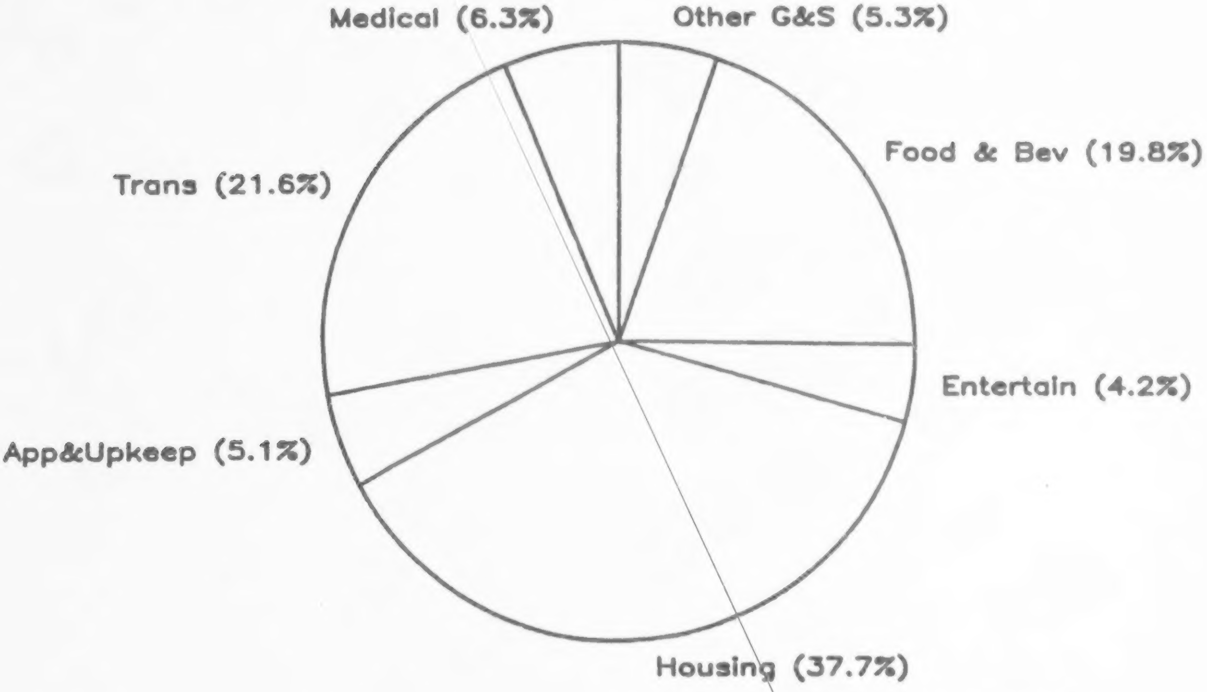
Introducing the Tucson Consumer Price Index (CPI)

Here it is ladies and gentlemen--115.0. Yea! Applause! Applause!

What? You are not impressed? You say you have seen 115 before, and you do not see anything special about this one?

If that is the way you feel, you are wrong. The number 115 is very special in what it represents in this case. It represents, you see, an index number summarizing the change of prices of all consumer goods and services (as represented by a market basket of selected items) in the Tucson metropolitan area between the first calendar quarter of 1983, and the fourth quarter of 1985. That is impressive, indeed.

It tells us that during these three years, while prices were rising 14.3 percent in the Phoenix area and 11.7 percent on average in the United States, they were rising 15 percent in Tucson. In other words, there is now a Tucson-specific inflation rate, and we now know that Tucson has been experiencing greater inflation than Phoenix. Tucson employers and labor organizations now have a measure against which to gauge proposed changes in wages. Tucson employees can know if they are being offered "real" increases, or just a chance to stay even. Or they can know if they are losing ground.



TUCSON CPI — Relative Importance
Quarter 4 1985

SOURCE: University of Arizona, Division of Economic and Business Research

The index was published for the first time in January 1986 by the Division of Economic and Business Research (DEBR), College of Business and Public Administration, University of Arizona. The index development procedure was ably reported by Dr. Nat de Gennaro, principal investigator. Those interested in the index's development can obtain a copy of the report from DEBR.

Contrary to popular belief, price indexes are not free. They do not spring full-blown from the head of Zeus, but have to be carefully, and meticulously compiled, and the process has to be repeated every quarter or every period for which the index is reported. The Tucson Consumer Price Index (CPI) is sponsored by First Interstate Bank of Arizona, just as the Phoenix CPI is sponsored by Valley National Bank.

The methodology used is a close approximation of the method used by the U.S. Department of Labor, Bureau of Labor Statistics in compiling the national "All-Urban" CPI. Because the national methodology was followed, the rates of price changes in Tucson can safely be compared to rates of changes in cities surveyed by BLS. All are warned, however, not to imply one city is more expensive than another based on consumer price indexes. This kind of index can only measure relative rates of change--inflation or deflation.

Note from the table below that there is a host of other index numbers associated with the CPI for "all items," i.e., the 115 reported at the outset. In fact, specific rates of change can be computed for every component of the index that is reported. A fast scan of the 1985 quarter four column reveals that the price of medical care in Tucson increased the most since 1983 (37.6 percent), and fuel prices increased the least (declined 3.2 percent).

Landlords and tenants might note that there is a residential rent component. During the three year period, it increased 20.9 percent or about 7 percent on average each year. (But home owners fared worse with costs rising 26.1 percent.) Landlords might consider using this component of the index to automatically adjust rents over long-term leases.

So you can see from these few examples there is a lot packed into that otherwise ordinary 115. Because that is so, the Arizona Labor Market Information Newsletter began publishing the Tucson CPI on its front page with the other reported price indexes in the March issue.

Ron Simon

TUCSON CONSUMER PRICE INDEX

BASE PERIOD QUARTER #1 1983 = 100

INDEX NAME	QTR 1 1983	QTR 4 1984	QTR 1 1985	QTR 2 1985	QTR 3 1985	QTR 4 1985
All Items	100.00	109.43	113.23	114.75	114.38	114.98
Food and Beverages	100.00	106.03	107.92	108.18	109.16	110.26
Food	100.00	105.72	107.85	107.89	108.87	109.90
Food at Home	100.00	105.06	107.28	106.68	108.95	109.78
Cereals and Bakery Products	100.00	108.94	112.99	115.06	115.52	116.30
Meats, Poultry, Fish, & Eggs	100.00	96.41	95.12	94.39	91.76	100.90
Dairy Products	100.00	95.51	104.49	103.44	100.82	103.00
Fruits and Vegetables	100.00	123.12	133.60	130.81	151.12	139.15
Other Food at Home	100.00	107.25	106.50	106.14	107.98	104.86
Food Away from Home	100.00	107.12	109.05	110.45	108.70	110.16
Alcoholic Beverages	100.00	111.26	109.25	113.15	114.06	116.34
Alcoholic Beverages at Home	100.00	109.53	106.43	109.54	108.67	112.33
Alcoholic Beverages Away from Home	100.00	116.79	118.25	124.68	131.25	129.12
Housing	100.00	109.40	113.26	114.11	113.54	114.70
Shelter	100.00	114.87	121.42	122.10	123.28	125.45
Renters' Costs	100.00	113.18	120.94	120.73	121.02	124.10
Rents, Residential	100.00	112.87	119.26	119.66	121.11	120.85
Other Renters' Costs	100.00	115.26	132.11	127.85	120.43	145.80
Homeowners' Costs	100.00	115.68	121.66	122.76	124.37	126.10
Owner's Equivalent Rent	100.00	114.86	121.94	123.22	125.02	126.80
Household Insurance	100.00	146.50	127.64	120.72	121.53	117.62
Maintenance and Repairs	100.00	113.94	109.89	112.68	109.80	114.40
Fuel and Other Utilities	100.00	104.39	102.13	103.91	98.03	96.78
Fuels, Gas (Piped) & Electricity	100.00	105.91	102.19	103.97	97.77	93.66
Other Utilities & Public Services	100.00	100.01	101.96	103.76	98.77	105.73
Household Furnishings and Operation	100.00	100.05	103.15	103.47	103.83	104.83
Apparel and Upkeep	100.00	103.19	107.42	107.69	103.93	104.11
Transportation	100.00	108.87	113.86	117.81	116.10	114.15
Private Transportation	100.00	107.68	114.07	116.34	113.94	112.17
New and Used Cars	100.00	120.97	129.13	134.38	131.01	128.95
Motor Fuel	100.00	93.40	83.69	90.13	85.10	83.82
Other Car Costs	100.00	104.94	125.94	119.84	121.50	119.59
Public Transportation	100.00	124.51	111.38	137.05	144.44	140.31
Medical Care	100.00	112.88	128.75	131.86	133.18	137.64
Entertainment	100.00	105.94	109.17	108.96	108.38	109.32
Other Goods and Services	100.00	130.94	122.20	124.38	127.42	128.44

Source: University of Arizona, Division of Economic and Business Research.

The Joy of Statistics

I admit to a lot of eccentricities but few that I will confess in public. Except this: I love statistics. I am an avid fan of the "Statistical Abstract of the United States." It's the best book the government publishes. I have a copy of the first edition (1879), and it will tell you--among other things--that the number of miles of railroad track in this country doubled in the first decade after the Civil War. But the most recent edition has 10 times as many tables and will enlighten you on anything from the number of golfers (14 million in 1983) to industry's spending on research and development ($59 billion in 1982).

The joy of statistics is not that they always provide answers but that they usually provoke good questions. If I were doing a story on water, the first question I'd ask is, Why has per capita consumption roughly doubled since 1950? If someone asked me to invest in a beer or wine company I'd probably decline. As a nation, we're getting older, and--having checked--I can tell you that consumption of alcohol drops as people age (half of people over 60 say they don't drink). Good statistics are rarely the end of knowledge, but they're often the beginning. Properly used, they can lead to truth and protect from falsehood.

Small Lies: The trouble is, of course, that statistics are regularly abused. The most common abuse probably occurs in everyday conversation, when people casually mention a number--making it up or remembering it incorrectly--to win an argument. These are little lies that we practice, but they're symptomatic of broader statistical brutalities. Wrongly used, statistics are a plague, because they project a false air of authority. During the war in Vietnam the Pentagon became obsessed with "body counts." Many large companies suffer from the illusion that they can be "run by the numbers": that top executives can exercise control through statistical reports from line managers. What happens is that line managers spend so much time reporting that they can't manage.

Some distortions are deliberate. Public opinion polls invite deception. To prove the popularity of President Reagan's tax plan, you cite surveys showing that roughly half of the public favor it, with about a third against. To demonstrate opposition, you cite polls indicating large majorities against specific proposals, such as the elimination of the deduction for local taxes. (In fact, inconsistent results often indicate just that: the public is ambivalent.) And some self-serving statistics leave you gasping. The Newspaper Advertising Bureau reports, for example, that more than 70 percent of men look at newspapers' food sections and a similar proportion of women look at sports sections. Really?

If you're going to use a number, you'd better know where it comes from, how reliable it is, and whether it means what it seems to mean. The garbage-in, garbage-out problem has been with us a long time. Or, as British economist Sir Josiah Stamp (1880-1941) put it: "The Government (is) very keen on amassing statistics. They collect them, add them, raise them to the nth power, take the cube root, and prepare wonderful diagrams. But you must never forget that every one of these figures comes in the first instance from the village watchman, who just puts down what he damn well pleases."

I admit to having used that wonderful quote before and that one reason for writing this column is to use it again. But the real reason is to gripe. Anyone who is a regular user of government statistics knows that he or she's been a victim of recent spending cutbacks. Incredible though it seems, the Labor Department no longer counts how many Americans belong to labor unions. Likewise, it has discontinued its survey of turnover rates (how many people quit or are fired) in manufacturing. Throughout the government there's been a nibbling away at the statistics we collect to show our own social and economic conditon.

To be sure, these are austere times; and some information is available from private sources. But, mostly, these cutbacks are shortsighted and abandon government's legitimate functions. Good political decisions are hardly guaranteed by good information, but they are even less likely with bad information. It's only when we don't have them that we realize how vital reliable statistics are to our social vision. For example, because we don't know the number of illegal aliens, the problem may be exaggerated (a recent panel of the National Research Council estimated that they number between two million and four million, well below many other estimates). Nor do we have an accurate estimate of the number of illiterate Americans.

Data Gaps: The government's statistical enterprise dates back at least to the first census in 1790. But few Americans realize that statistics that populate nightly television news are mostly recent. The government began publishing the gross national product on a quarterly basis only in 1947. It was no simple job to figure out, first, how to measure the economy's total output and then to devise surveys to do it. There were comparable problems with data for the unemployment rate (first collected on a monthly basis in 1940) and the consumer price index (introduced monthly also in 1940). Estimating the employed, for example, was relatively easy. You could ask employers. But how do you determine who wants a job and doesn't have one? You can't ask employers. Breakthroughs in sampling techniques for households were necessary.

Even now, few of these statistics are perfect. We are a predominantly service economy, yet our detailed information about service industries is paltry when compared with manufacturing. Many of our statistics could be improved at modest cost. The future of the republic is not in jeopardy, but some government activities deserve more because government should do well what it exists to do. I recognize that I'm exposing myself to ridicule. In our society, if you love dogs, cats, or goldfish you're considered normal, and even nice. Say a kind word for statistics and you're regarded as a little mad. As a statistics consumer I'm also open to the charge of self-pleading. Well, I can take it. I'm tough. But don't call me a numbers-cruncher. I don't crunch them, I coddle them.

Robert J. Samuelson

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New Developments

"New Developments" is featured each month as a service to employers and job seekers. It is a compilation of public announcements of the more significant new construction, grand openings, major hirings and layoffs, and other employer events that have special significance for Arizona labor markets. The announcements are paraphrased and otherwise edited from articles published in newspapers and other periodicals from throughout the state. "New Developments" are limited to space available, and no attempt is made to compile an exhaustive list of all such events that have occurred during the month.

MANUFACTURING - The high tech AiResearch plant, which has been under construction in Tucson since October 1984, will open its doors at the beginning of the summer as the AiResearch Electronics Systems Division begins to move in. This $25 million building project is nestled in the foothills of the northwest side, at 11100 North Oracle Road. This first phase of the plant, which is composed of four primary buildings and covers about 355,000 square feet, is only part of a larger plan. AiResearch expects to expand the facility to 1 million square feet by the mid-1990s.

According to Bob Handley, AiResearch manager of sales, the company doubled its Tucson work force to 800 employees by adding 376 new workers in 1985, and hopes to do the same in 1986, raising the total to 1,200. He added that by the time the "fuller complement" is finished in about 10 years, AiResearch expects to employ approximately 4,000 people. The University of Arizona's Division of Economics and Business Research has projected that two extra jobs will be created for every one job directly linked to AiResearch.

American Woodmark Corporation of Winchester, Virginia (a cabinet manufacturer) plans to build a manufacturing facility at the Airport Industrial Park in Kingman. Company officials said they hope to begin construction within a year of a 100,000 square-foot plant that will house assembly and warehousing operations. The plant initially will employ 50 people. Officials said the plant will serve as a regional assembly facility for distribution of kitchen and vanity cabinets to West Coast markets.

Ground was broken in mid-February on a $55 million facility for the M/A COM Microwave Subsystem Divison in Chandler. The Massachusetts-based firm will manufacture microwave systems in the 80,000 square-foot facility. About 280 employees from M/A COM's four plants in Tempe will be moved to the new plant, which is expected to be in full operation by October. Approximately 550 employees will work there by 1989.

LAYOFFS - Hughes Aircraft Company announced in mid-March that it would lay off about 300 employees at its Tucson plant within 60 days. The layoff affected mostly support employees in administration and engineering rather than production workers, spokesman Michael Letson said. Hughes employs nearly 9,000 people, up from the 6,500 employee work force in the beginning of 1985. Leston said the decision to cut the employment level was made after a study of the plant's "work skills mix" conducted over the past few weeks. Employees laid off will receive two weeks notice, and the company is producing a variety of services, including aid in seeking new employment, counseling, and the assistance of the Arizona Department of Economic Security, officials said. They also said the plant has a backlog of work that will take several years to complete.

Cyprus Minerals Company plans on taking over the Sierrita copper mine near Tuscon on April 1, and notified its 1,100 employees in mid-March that over half of them would become laid off effective with that date. "Our operating plan requires an initial work force of approximately 600 total employees," the notice said. Cyprus told the Sierrita employees to reapply for their jobs at the mine and that they would hear within 11 days whether they would be retained. "Looks like we are going to be new hires if we are going to get hired. And that is an if," said Glenda Knagge, a 30-year old mill operator who has worked at Sierrita for 12 years. Cyprus, spun off from Amoco eight months ago, announced in February its intentions to buy Duval's Sierrita and Esperanza mines about 25 miles south of Tucson. Only the Sierrita mine, which produces about 200 million pounds of copper annually, is operating. Cyprus spokesman, Richard Hagman said, "We are trying right now to take steps to ensure an orderly transition of the work force."

American Rockwool in Casa Grande closed its wool insulation manufacturing plant on March 11, laying off about 100 workers, a company executive said. The plant had been operating under a conditional operating permit since last summer, but that permit expired a few days after the shutdown. The plant was closed because it was unable to meet federal air quality standards.

REHIRES - The Phoenix-based Semiconductor Products Sector of Motorola Incorporated recalled about 350 Valley employees laid off last year, company officials announced at the beginning of March. The sector expects about 70 percent of the furloughed employees to accept Motorola's invitation to return to work. The recall involves employees who took a voluntary leave as well as those laid off by the firm, according to Ken Phillips, company spokesman. Motorola also has restored the pay cuts made during late 1985 in the semiconductor sector. Half of the cuts, for about 18,500 employees, were restored in mid-February. The rest were reinstated as of March 1. Because of automation, semiconductor employment will not grow as rapidly as it has in the past, Phillips said. But Motorola is pleased with the industry's slight upturn and expects continued improvement. "We are seeing a broad-based demand," he said, "which is good."

Arizona Labor Market Newsletter
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ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. X No. 5
May 1986

Unemployment Rate

Seasonally Adjusted
March*

ARIZONA	6.5%
Maricopa Co.	5.3%
Pima Co.	5.3%
UNITED STATES	7.2%

Consumer Price Index

National-March
1967 - Base Year

Wage Earner/Clerical Worker - 321.4
% Chg. Yr. Ago 1.9

All Urban - 326.0
% Chg. Yr. Ago 2.3

Phoenix-1st Qtr. 1986
1977 - Base Year

All Urban - 191.6
% Chg. Yr. Ago 2.0

Tucson-1st Qtr. 1986
1st Qtr. 1983 - Base Qtr.

All Urban - 115.7
% Chg. Yr. Ago 2.2

* Preliminary

Arizona & Its Foreign-Born: A Mutualistic Relationship

Arizona is growing at an impressive rate. Between 1970 and 1980, Arizona's population grew an average of 4.4 percent per year. Since the 1980 Census, Arizona has grown an estimated 15.9 percent, ranking second behind Alaska. Between 1970 and 1980, Arizona added an average of 94,000 people per year to its population; the increase for the 1980s amounts to an average of 100,000 per year. What is the source of this striking population growth? Migration...for the most part.

Any future population gains can be substantially altered by the net in-migration pattern changes, which are affected both by national and local economic conditions. During the 1970s, three-fourths of the gain in population was the result of migration; during the 1980s, two-thirds.

Foreign-born immigrants account for nearly 10 percent of the net in-migration positive balance (in-migration less out-migration) to the state. The influx of about 6,000 foreign-born individuals per year to Arizona's mainstream should, in the long-run, make an impact on most of the state's socioeconomic components--particularly on its labor supply.

Just how well are foreign-born individuals doing economically? What are their labor market experiences? And what sort of influence have they had on Arizona's labor market? By utilizing data from the Census

Arizona Department of Economic Security

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Arizona Labor Market Information Newsletter
WINNER OF THE ICESA 1985 LMI PUBLICATION AWARD

Nancy Augustin, editor
Processed by RA Clerical Support Unit

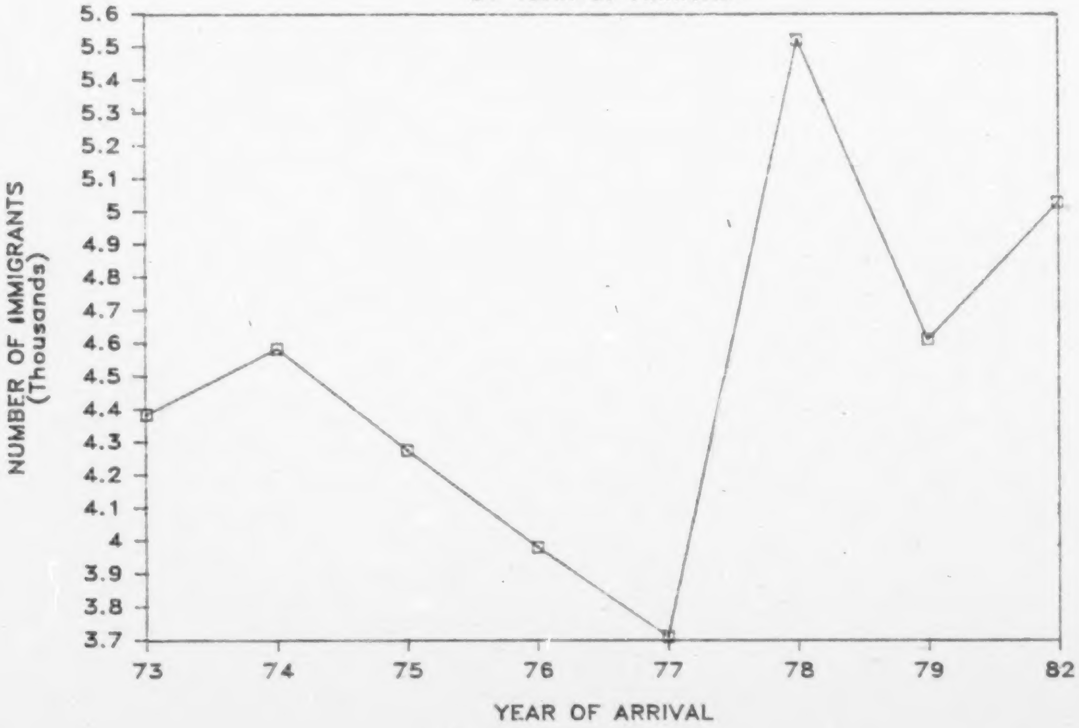
Bureau and the Immigration and Naturalization Service, this article may provide some enlightenment on the subject.

Foreign immigrant data should be analyzed with care because every source represents a piece of the ever-dynamic, flowing puzzle: the foreign-born immigration net balance. Much of the data on immigrant population flows (movement of foreign people in and out of an area in a particular time period) is estimated by the Census Bureau based on data from: 1) the Immigration and Naturalization Service on the number of legal immigrants entering the country and, 2) the Office of Refugee Resettlement on the number of refugees entering the country. The Census Bureau supplements these data by estimating emigration and undocumented immigration from data on population stocks (number of foreign people in a given area at a particular time), primarily from the 1980 Decennial Census.

Studies of the foreign-born at the national level (see Monthly Labor Review, July 1985) show that recently arrived immigrants experience major difficulties in the labor market, especially during their first years in the country. But with the passage of time, a pattern of substantial upward mobility

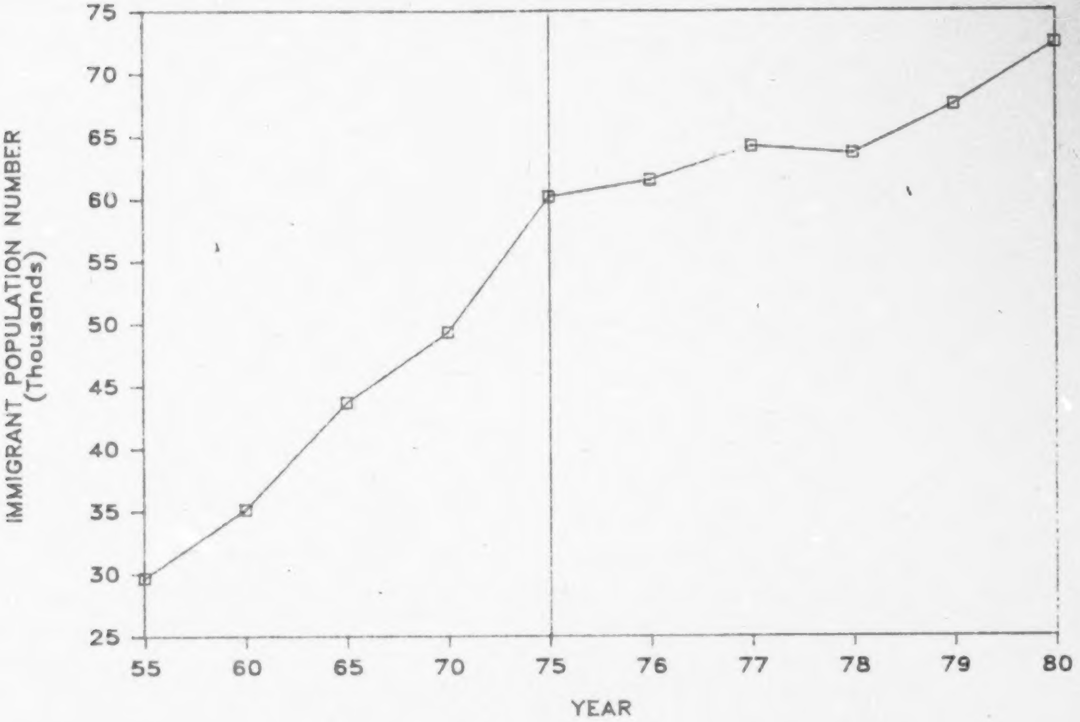
LEGAL IMMIGRANTS TO ARIZONA

BY YEAR OF ARRIVAL



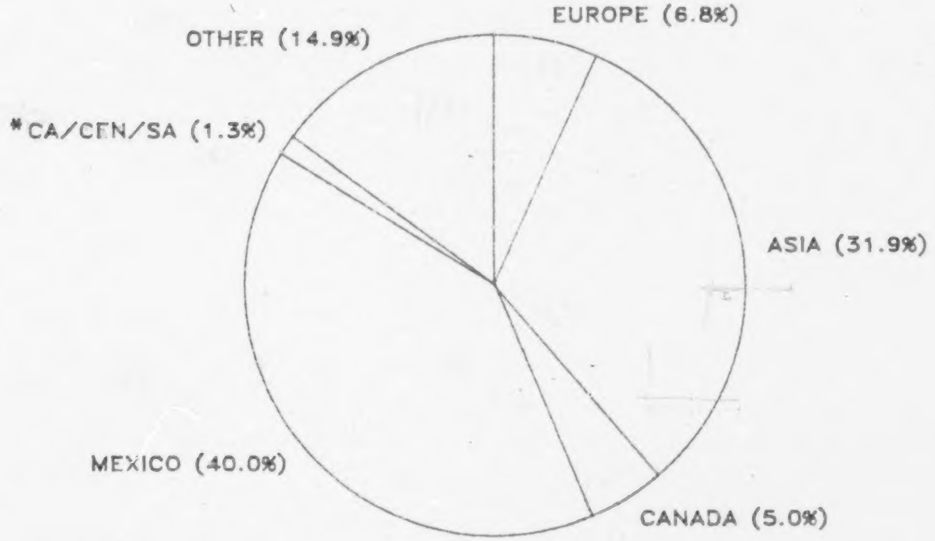
follows, and their employment and earnings approach the levels of native-born workers. In a little over a decade, foreign-born males reached earnings equality with their U.S.-born counterparts. Thereafter, they actually have higher earnings--a fact substantiated by Barry Chiswick in his analysis of 1970 Census data. In Arizona, individuals born abroad who immigrated prior to 1970 had, by 1980, almost reached the same employment and earnings status of native-born, while arrivals after 1970 showed a substantial deficiency, following the national pattern.

ARIZONA LEGAL IMMIGRANT POPULATION



Arizona's positive rate of in-migration is one of the by-products of economic expansion. For many years, the state's broadening economic base has been absorbing a tremendous growth in labor force while maintaining its unemployment rate below the nation's average. Arizona not only has become attractive to interstate migrants, but increasingly so to international immigrants. The 1980 Census of population revealed the fact that, of the 162,806 foreign-born individuals living in Arizona, almost 40 percent came during the 1970s. This figure includes all foreign-born Arizona residents regardless of immigration status. The number of illegal immigrants in Arizona is estimated at 25,000 by the the Census Bureau.

In addition to the dramatic immigration increase in recent years, there has been a significant shift in the geographical origins of immigrants, their education, and the motivating circumstances that brought them here. Asians, for example, represent 32 percent of the foreign-born who arrived in Arizona during 1982, while their proportion during the 1970s was 20 percent. Currently, Asians are the fastest growing and the best educated minority group in the United States. Also, the proportion of immigrants from Europe declined 5 percent in 1982. However, the largest share of immigrating individuals came from Mexico. They comprised 53 percent of all foreign-born who arrived in Arizona during the 1970s.


ARIZONA LEGAL IMMIGRANTS 1982

BY PLACE OF ORIGIN

* Caribbean, Central and South America

Arizona's foreign-born situation should be analyzed from a different perspective due to the fact that most of the undocumented immigration comes to the United States through the Southern frontier, and Arizona shares a part of it. Since 1970, economic and political factors abroad have compelled an increasing number of people to leave their native country. The United States, with a higher standard of living, and Arizona in particular--because of its economic growth and proximate location--is becoming a popular destination to an increasing number of immigrants. For this reason, Arizona's foreign-born (primarily those who arrived after 1970) are a remarkably dichotomous group of people whose differences begin with their geographic place of origin.

EDUCATION

Nearly 30 percent of those immigrants 25 years of age or older who arrived in Arizona from Mexico or Cuba during the 1970s had less than five years of schooling, compared with only 3.8 percent of Arizona's population and about 7 percent of the immigrants from other countries. By contrast, only 3.2 percent of the immigrants from

Mexico had four or more years of college education, compared to at least 25 percent of the individuals arriving from other countries and 17 percent of Arizona's population. The foreign-born who arrived prior to 1970 had lower educational levels than Arizona's native-born, while the most recent arrivals can be divided virtually in half: one group with higher educational levels and another group with substantially lower educational levels than Arizona's native-born.

The educational gap between immigrant groups becomes significant for the assessment of their impact and status in the labor force. When these two contrasting groups are treated as a whole, a distorted image could result and erroneous conclusions could be drawn. Education plays a major role in the employability of most individuals, but in the case of foreign immigrants it is essential--especially during the initial five years after arrival when their earnings and occupational status are lower and their unemployment is high. Surely, during this adjustment period foreign individuals gain a better command of the English language while at the same time they obtain work experience, references, and a working record in their adopted country. This, without a doubt, contributes to to their upward mobility in the future.

OCCUPATIONS

The occupational distribution of the foreign-born in Arizona mirrors their educational attainment distribution. Most Mexican immigrants in 1980 were employed in low-skill, blue-collar occupations. Three out of five native-born workers in Arizona and two out of five immigrants from countries other than Mexico were employed in white-collar occupations, typically professional and managerial or clerical and sales positions. In contrast, only 13 percent of Mexican immigrants were employed in white-collar occupations, and over 30 percent of them held jobs as laborers or machine operators. On the other hand, immigrants who arrived prior to 1970 (regardless of their place of origin), had an occupational distribution very similar to Arizona's native-born individuals.

Income characteristics for the immigrant groups also follow the educational and occupational distribution pattern. However, there is an underlying fact about Arizona's foreign-born population according to their place of origin. This is that Mexican immigrant data includes about 20,000 undocumented individuals whose goals are of a different nature than the objectives of legal immigrants or future citizens. Therefore, their preparation, background, and characteristics are equally different.

LABOR MARKET IMPACT

The most meaningful economic effect of foreign immigration is that it leads to an increase in the labor force. This is mainly because foreign-born immigrants' median age is 25.1, with a labor force participation rate of about 60 percent. Unemployment rates of immigrants who arrived in Arizona during the 1970s range from 3.1 to 12.5, depending upon their place of origin. These figures compare quite favorably with unemployment figures of individuals from other target groups (e.g., dropout-teenagers), indicating that Arizona has been receptive to the skills that foreign-born individuals had to offer.

The 1970s was a decade of enormous growth for Arizona. The labor force nearly doubled, while wage and salary employment rose by about 85 percent. Services increased by 127 percent; followed by construction, 106 percent; trade and FIRE, 91 percent; TCPU, 71 percent; and manufacturing, 69 percent. In all, Arizona created 581,000 jobs in the 1970s, and nearly 4 percent of them were obtained by immigrants arriving during those years.

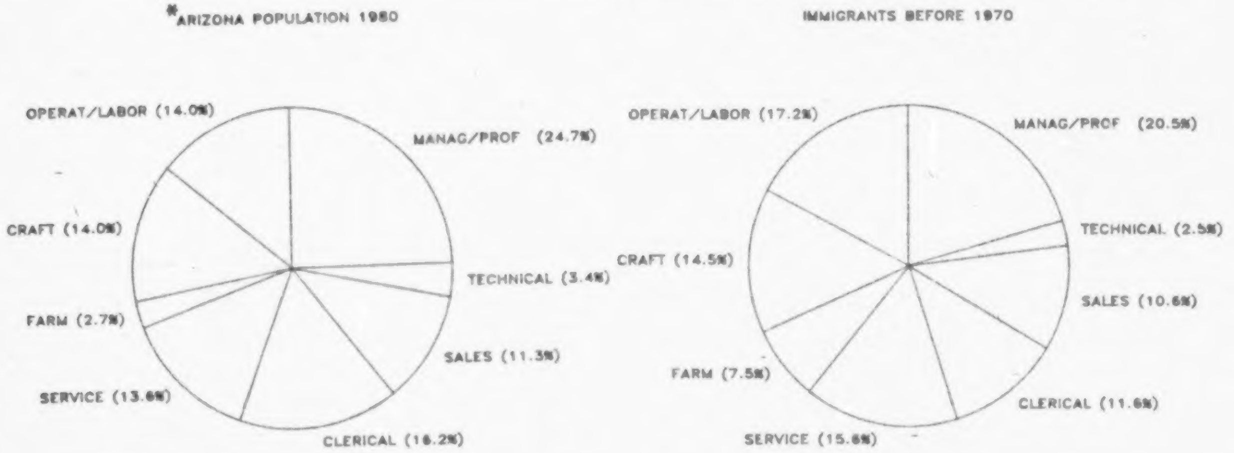
Luckily for immigrants, the majority of new, emerging jobs during the 1970s (and persistently through the 1980s) have been entry-level positions in the services-producing industries: e.g., retail sales, office clerks, waiters and waitresses, bookkeeping clerks, etc. This is precisely the type of job sought by most recently arrived immigrants. Perhaps this explains the relatively low rate of unemployment experienced by new immigrants who found an ideal environment in Arizona's receptive labor market, which had managed to absorb the increasing supply of foreign labor.

Arizona's Foreign-Born Occupational Growth Rate 1970-1980

Managerial and Professional	40%
Technical	54
Sales	31
Clerical	38
Services	59
Farm	85
Craft	51
Operatives & Laborers	73

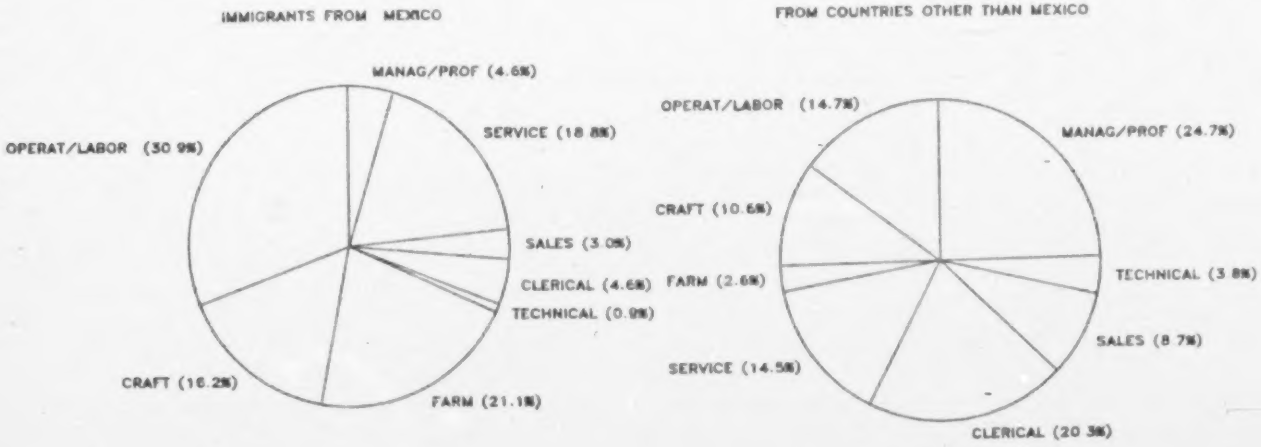
A major study: Recent Immigrants to Los Angeles: Characteristics and Labor Market Impacts, by Thomas J. Espenshade and Tracy Ann Goodis of the Urban Institute of Washington, D.C., focused on the impact of Mexican immigrants on black unemployment in southern California. Blacks were chosen because their socioeconomic characteristics made them vulnerable to the presence of Mexican immigrants. Results of the study confirmed that the presence of Mexican immigrants:

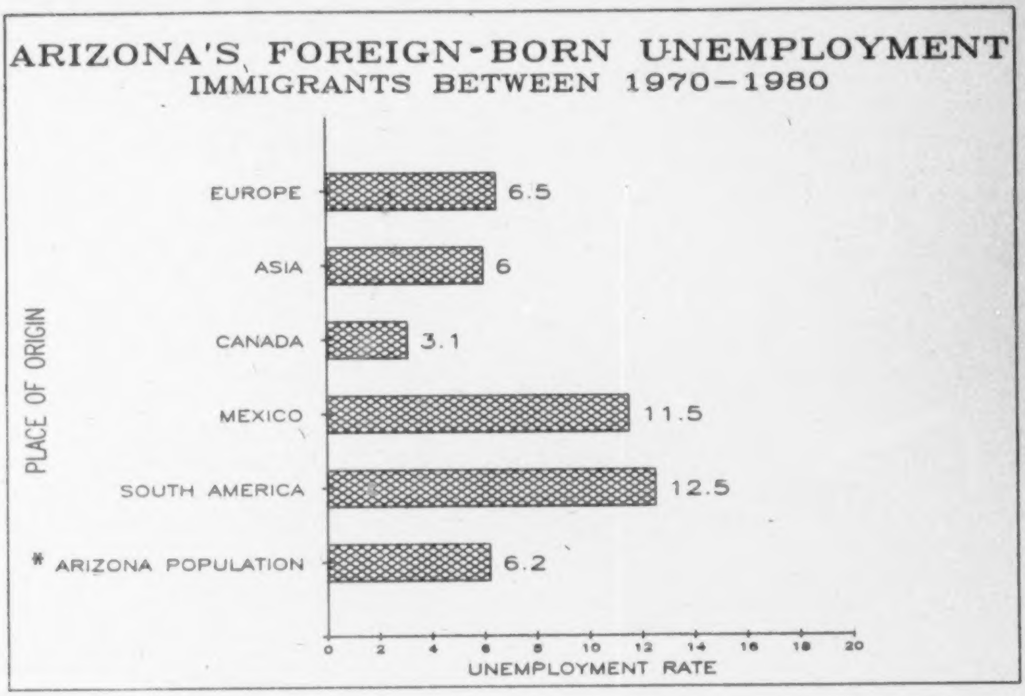
OCCUPATIONAL DISTRIBUTION–ARIZONA 1980



*Native-born Population

IMMIGRANTS BETWEEN 1970–1980




ARIZONA'S FOREIGN-BORN UNEMPLOYMENT
IMMIGRANTS BETWEEN 1970–1980

*Native-born Population

- Does not decrease labor force participation of other groups.
- Does not provide evidence of sharp job competition between Blacks and immigrants reflected in unemployment rate trends.
- Does not provide evidence that Mexican immigrants take away jobs from Blacks.

Other findings of the report include:

- Mexicans, and in all likelihood other immigrant groups, reduced the average wages in manufacturing and some services. This fact reflects the increasing number of immigrants into those industries, but not necessarily the decrease of individual wages.
- Immigrants may have slightly depressed the wages of non-Hispanics working as laborers, but their impact on the wages paid to non-Hispanics in semi-skilled and skilled occupations is for the most part, negligible.

Contrary to popular belief, the data tends to support the fact that a mutualistic relationship exists between foreign-born immigrants and Arizona's labor market. Ideally, knowledge of the numbers of foreign arrivals, their characteristics, and geographic origin would be most helpful for economic planning and to better evaluate the quantity and the quality of the labor supply in Arizona.

Clara Dunn

SOURCES: U.S. Congress. House. Subcommittee on census and population of the committee on Post Office and Civil Service. Demographic Impact of Immigration on the United States. Serial No. 99-8, 99th Congress, First Session, 1985.

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Veterans Job Training Program Renewed

Employers can again receive reimbursement of a portion of an employee's salary by hiring a veteran certified under the Veterans Job Training (VJT) program. The program is designed to provide full time, permanent employment to unemployed Korean or Vietnam era veterans. Veterans can be certified through the local Job Service offices.

Employers must also be certified. This can be accomplished by contacting the local Job Service office. Once certified, an employer hiring a veteran in the program can receive one-half of the starting salary of the veteran up to $10,000 per VJT employee. By establishing an employer-needs based training program, the company may be paid up to 15 months for certain disabled Vets and up to nine months for others.

Enrollment in the program is a one-step process that can be started by calling the local Job Service office. The payment to the employer is a check from the VA on a monthly or quarterly basis depending on the size of the company. Any employer--public, nonprofit, or private sector--is eligible to participate. There are no restrictions on the type of business nor the type of job. Under the previous program, Arizona Job Service staff placed 961 Arizona veterans in jobs.

Job Service local offices can provide:

- Additional information on the program;
- Necessary forms to enroll in the program;
- Assistance in filling out the forms;
- Training guidelines for specific jobs;
- Referral of certified veterans to an employer;
- Follow-up to ensure an employer is reimbursed.

The Job Service office in your local area is listed in the phone book under government listings, State of Arizona.

Arizona Unemployment Insurance Activities - February 1986

	February 1986	January 1986	February 1985	% Change From One Year Ago
Arizona Claimants Served*	28,442	33,338	25,746	+10.5%
Arizona Average Weeks Unemployed**	8.8	8.2	8.5	+ 3.5%
Arizona Benefits Paid*	$ 9,087,413	$ 10,767,507	$ 8,017,128	+13.3%
Arizona Trust Fund Balance	$338,877,174	$326,009,229	$251,846,691	+34.6%

*All Programs **UI Only

The Arizona Labor Force in March

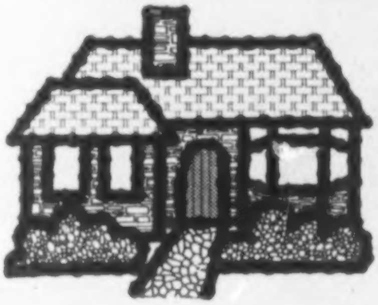
Recently the national economy has shown substantial sluggishness, with unemployment increasing and job creation in the goods-producing side of the economy either flat or declining. While Arizona continues to be affected by those same forces, our economy remains strong. Unemployment has remained flat recently with employment growth still quite good, as the service-producing side of the economy stays strongest. Job growth over the last 12 months has been 5.6 percent. Although that is considerably below our experience in both 1984 and 1985, it remains considerably above the national performance of 3.0 percent.

Looking at the economy by industry and area, the situation is little changed over its performance of the last few months. The Phoenix and Tucson areas remain healthiest as rapid population growth, moderately strong manufacturing activity, and a rebounding construction industry combine to create jobs. Only one major industry showed a drop in employment in March. The transportation, communications, and public utility industry registered a drop as seasonal maintenance of a power plant was completed. But otherwise, even the state's mining industry saw an increase of 200 jobs.

Particularly encouraging in March was the apparent recovery that construction employment is enjoying, as 600 jobs were added. Although mortgage rates have been declining recently, the completion of many large commercial projects was significant enough to offset gains in residential construction. This is the first increase in employment that the industry has seen in seven months, and it would appear that similar increases lie ahead. But considering the other problems that haunt this sector of the economy, the recovery is expected to be modest.

In manufacturing, strength in aerospace hiring continues to offset losses in electronics and other high technology companies. A total of 300 jobs were added in manufacturing as electronics lost 300 jobs and aerospace added 500. The outlook seems to be improving slowly, as evidenced by a rising book-to-bill ratio that has been over 1.0 for three months. But overall, the weak national and international economies will keep employment from growing more rapidly.

Notwithstanding tha moderate growth that manufacturing, mining, and construction enjoyed in March, the service-producing side of the economy remains our fastest growing area. Approximately nine out of every 10 jobs created in March came from service-producing businesses. Some of the growth came in seasonal areas as winter tourism, tax preparation, and government hiring added many jobs. But as well, the state's finance, insurance, and real estate industry continued to hire at a very rapid rate. Deregulation, combined with falling interest rates that have spurred home sales and refinancing of existing loans, have accounted for most of the growth. Along with an increased demand for restaurants, food stores, health care, and other services that are a result of an expanding population, the outlook throughout Arizona's service-producing industries is good.



Employment growth remains steady and the outlook is for more of the same. We are not isolated from forces nationally that continue to depress activity, but our mix of businesses and rate of population growth work to our advantage. The months ahead may record higher unemployment rates, but the likelihood that our unemployment rate will rise above the national rate has diminished recently.

Dan Anderson

Arizona Labor Force and Employment

March 1986 (in thousands)

	ARIZONA				
				-- Amt Change --	
	Mar.* 1986	Feb. 1986	Mar. 1985	Feb. to Mar.	1985 to 1986
TOTAL CIVILIAN LABOR FORCE**	1550.1	1533.1	1465.0	+17.0	+85.1
Total Unemployment	99.7	99.9	90.5	-0.2	+9.2
Rate	6.4	6.5	6.2	---	---
Rate (Sea. Adj.)***	6.5	6.5	6.3	---	---
Total Employment	1450.4	1433.2	1374.5	+17.2	+75.9

The Above Labor Force Statistics Should N

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

TOTAL WAGE AND SALARY	1332.9	1320.7	1262.4	+12.2	+70.5
Manufacturing	181.4	181.1	179.5	+0.3	+1.9
Durable Goods	142.7	142.5	142.0	+0.2	+0.7
Stone, Clay and Glass	7.9	7.9	7.8	+0.0	+0.1
Primary and Fabricated Metals	16.2	16.4	17.1	-0.2	-0.9
Primary Metals	7.8	7.9	7.7	-0.1	+0.1
Fabricated Metals	8.4	8.5	9.4	-0.1	-1.0
Machinery	64.5	64.8	70.3	-0.3	-5.8
Other Durable Goods	54.1	53.4	46.8	+0.7	+7.3
Aircraft and Missiles	26.2	25.7	20.9	+0.5	+5.3
Lumber and Wood Products (Except Furniture)	7.4	7.5	6.9	-0.1	+0.5
All Other Durable Goods	20.5	20.2	19.0	+0.3	+1.5
Nondurable Goods	38.7	38.6	37.5	+0.1	+1.2
Food and Kindred Products	8.8	8.6	8.3	+0.2	+0.5
Apparel	4.8	5.0	4.7	-0.2	+0.1
Printing and Publishing	14.8	14.6	14.3	+0.2	+0.5
All Other Nondurable Goods	10.3	10.4	10.2	-0.1	+0.1
Mining and Quarrying	11.2	11.0	12.2	+0.2	-1.0
Copper Mining	8.7	8.6	9.5	+0.1	-0.8
Other Mining and Quarrying	2.5	2.4	2.7	+0.1	-0.2
Construction	109.9	109.3	107.8	+0.6	+2.1
Trans., Communications, and Public Utilities	63.9	64.1	61.8	-0.2	+2.1
Transportation	28.7	28.7	28.3	+0.0	+0.4
Communications and Public Utilities	35.2	35.4	33.5	-0.2	+1.7
Trade	331.6	329.1	307.7	+2.5	+23.9
Wholesale Trade	65.0	64.5	62.5	+0.5	+2.5
Retail Trade	266.6	264.6	245.2	+2.0	+21.4
General-Merchandise and Apparel	40.1	40.2	39.3	-0.1	+0.8
Food Stores	39.9	40.2	37.3	-0.3	+2.6
Automotive and Service Stations	32.0	31.6	29.1	+0.4	+2.9
Eating and Drinking Places	98.8	97.4	88.3	+1.4	+10.5
Other Retail Trade	55.8	55.2	51.2	+0.6	+4.6
Finance, Insurance, and Real Estate	87.7	86.0	78.0	+1.7	+9.7
Services and Miscellaneous	315.4	310.6	291.5	+4.8	+23.9
Hotels and Other Lodging Places	32.5	31.6	30.2	+0.9	+2.3
Business Services	71.0	69.5	64.4	+1.5	+6.6
Health Services	77.5	76.6	72.7	+0.9	+4.8
Other Services	134.4	132.9	124.2	+1.5	+10.2
Government	231.8	229.5	223.9	+2.3	+7.9
Federal	41.2	40.9	39.7	+0.3	+1.5
State and Local	190.6	188.6	184.2	+2.0	+6.4
School	112.9	112.9	113.8	+0.0	-0.9

* Preliminary

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

NOTE--Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment

March 1986 (in thousands)

MARICOPA COUNTY					PIMA COUNTY				
			-- Amt Change --					-- Amt Change --	
Mar.* 1986	Feb. 1986	Mar. 1985	Feb. to Mar.	1985 to 1986	Mar.* 1986	Feb. 1986	Mar. 1985	Feb. to Mar.	1985 to 1986
963.3	952.5	906.9	+10.8	+56.4	306.0	302.3	289.1	+3.7	+16.9
50.6	50.7	44.0	-0.1	+6.6	16.1	15.9	15.5	+0.2	+0.6
5.3	5.3	4.9	---	---	5.3	5.3	5.4	---	---
5.3	5.3	4.9	---	---	5.3	5.2	5.4	---	---
912.7	901.8	862.9	+10.9	+49.8	289.9	286.4	273.6	+3.5	+16.3

Be Used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

MARICOPA Mar.* 1986	MARICOPA Feb. 1986	MARICOPA Mar. 1985	MARICOPA Feb. to Mar.	MARICOPA 1985 to 1986	PIMA Mar.* 1986	PIMA Feb. 1986	PIMA Mar. 1985	PIMA Feb. to Mar.	PIMA 1985 to 1986
877.8	869.8	831.1	+8.0	+46.7	241.4	241.9	229.9	+2.5	+14.5
128.8	128.8	131.1	+0.0	-2.3	33.2	32.9	30.5	+0.3	+2.7
102.6	102.6	105.1	+0.0	-2.5	27.9	27.7	25.5	+0.2	+2.4
4.8	4.9	4.8	-0.1	+0.0					
10.7	10.8	11.4	-0.1	-0.7					
50.6	50.9	56.5	-0.3	-5.9					
36.5	36.0	32.4	+0.5	+4.1					
26.2	26.2	26.0	+0.0	+0.2	5.3	5.2	5.0	+0.1	+0.3
5.5	5.5	5.6	+0.0	-0.1					
3.0	3.1	2.8	-0.1	+0.2					
10.7	10.5	10.4	+0.2	+0.3					
7.0	7.1	7.2	-0.1	-0.2					
0.6	0.6	0.6	+0.0	+0.0	2.1	2.1	2.5	+0.0	-0.4
76.2	76.3	76.7	-0.1	-0.5	21.7	21.2	20.0	+0.5	+1.7
42.0	41.8	40.0	+0.2	+2.0	9.2	9.2	9.1	+0.0	+0.1
19.6	19.6	19.2	+0.0	+0.4	4.4	4.3	4.2	+0.1	+0.2
22.4	22.2	20.8	+0.2	+1.6	4.8	4.9	4.9	-0.1	-0.1
228.5	226.7	210.4	+1.8	+18.1	54.4	53.9	50.7	+0.5	+3.7
51.9	51.5	49.4	+0.4	+2.5	7.5	7.4	7.2	+0.1	+0.3
176.6	175.2	161.0	+1.4	+15.6	46.9	46.5	43.5	+0.4	+3.4
25.9	25.9	25.2	+0.0	+0.7	7.2	7.2	7.4	+0.0	-0.2
25.9	26.1	23.9	-0.2	+2.0	6.5	6.4	6.0	+0.1	+0.5
20.5	20.2	18.6	+0.3	+1.9	5.4	5.4	4.7	+0.0	+0.7
65.7	64.7	57.9	+1.0	+7.8	18.1	18.0	16.4	+0.1	+1.7
38.6	38.3	35.4	+0.3	+3.2	9.7	9.5	9.0	+0.2	+0.7
68.8	67.4	61.2	+1.4	+7.6	12.5	12.4	11.0	+0.1	+1.5
215.6	211.8	198.5	+3.8	+17.1	59.4	58.9	55.1	+0.5	+4.3
18.9	18.4	18.3	+0.5	+0.6	5.9	5.7	5.1	+0.2	+0.8
58.1	56.7	52.9	+1.4	+5.2	10.3	10.2	9.1	+0.1	+1.2
51.9	51.2	48.2	+0.7	+3.7	16.2	16.1	15.5	+0.1	+0.7
86.7	85.5	79.1	+1.2	+7.6	27.0	26.9	25.4	+0.1	+1.6
117.3	116.4	112.6	+0.9	+4.7	51.9	51.3	51.0	+0.6	+0.9

-- Prepared by Labor Market Information, Research and Analysis (CPS, 1/86)

Nonmetropolitan Counties
Labor Force and Employment
March 1986

	Apache	Cochise	Coconino	Gila	Graham	Green-lee	La Paz
TOTAL CIVILIAN LABOR FORCE*.	15,150	35,550	38,450	12,425	7,850	2,975	4,550
Total Unemployment	2,850	2,925	3,625	2,025	825	300	725
Rate	18.8%	8.2%	9.4%	16.3%	10.5%	10.1%	15.9%
Rate (Seas. Adj.)**. . . .	19.6%	8.2%	9.1%	16.0%	10.6%	10.0%	-INA-
Total Employment	12,300	32,625	34,825	10,400	7,025	2,675	3,825

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Apache	Cochise	Coconino	Gila	Graham	Green-lee	La Paz
TOTAL WAGE AND SALARY. . . .	13,975	24,800	34,250	9,900	4,800	2,800	2,625
Manufacturing.	700	2,100	2,650	1,300	175	0	75
Mining and Quarrying	25	150	25	1,250	0	1,700	0
Construction	900	1,275	1.575	425	125	125	150
Trans., Comm., & Pub. Util..	1,675	1,675	2,775	375	150	50	50
Trade.	1,450	5,350	7,675	1,875	1,250	275	850
Fin., Insur., & Real Estate.	225	675	775	275	125	25	100
Services and Miscellaneous .	3,700	3,750	7,775	1,850	850	75	625
Government	5,300	9,825	11,000	2,550	2,125	550	775

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL CIVILIAN LABOR FORCE*.	27,025	25,575	34,800	8,975	32,425	35,050
Total Unemployment	2,875	3,775	4,350	950	2,425	5,375
Rate	10.6%	14.8%	12.5%	10.6%	7.5%	15.3%
Rate (Seas. Adj.)**. . . .	10.4%	14.4%	12.7%	12.9%	7.1%	-INA-
Total Employment	24,150	21,800	30,450	8,025	30,000	29,675

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL WAGE AND SALARY. . . .	18,225	18,975	26,350	8,300	21,350	24,200
Manufacturing.	2,375	1,700	3,225	1,100	2,200	1,725
Mining and Quarrying	275	1,125	3,425	0	550	50
Construction	1,250	1,000	1,275	350	2,000	1,575
Trans., Comm., & Pub. Util..	1,075	1,525	925	525	950	925
Trade.	5,125	3,625	4,950	3,400	5,375	7,500
Fin., Insur., & Real Estate.	925	350	700	250	900	950
Services and Miscellaneous .	3,775	4,900	2,900	1,175	4,475	4,500
Government	3,425	4,750	8,950	1,500	4,900	6,975

*Adjusted to the Current Population Survey (CPS) to reflect place of residence.
**Seasonal adjustment not applicable for economic assistance programs.

NOTE--Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs
March 1986

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,550,145	1,450,430	99,715	6.4%
Apache	15,144	12,305	2,839	18.7
Cochise	35,540	32,616	2,924	8.2
Coconino	38,446	34,831	3,615	9.4
Gila	12,411	10,392	2,019	16.3
Graham	7,859	7,025	834	10.6
Greenlee	2,963	2,669	294	9.9
La Paz	4,543	3,822	721	15.9
Maricopa	963,333	912,703	50,630	5.3
Mohave	27,039	24,162	2,877	10.6
Navajo	25,586	21,801	3,785	14.8
Pima	306,010	289,933	16,077	5.3
Pinal	34,802	30,453	4,349	12.5
Santa Cruz	8,979	8,035	944	10.5
Yavapai	32,433	29,997	2,436	7.5
Yuma	35,057	29,686	5,371	15.3

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators. Note: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Estimated Hours and Earnings of Production Workers in Selected Industries in Arizona
March 1986

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVG. HOURLY EARNINGS		
	MAR.* 1986	FEB. 1986	MAR. 1985	MAR.* 1986	FEB. 1986	MAR. 1985	MAR.* 1986	FEB. 1986	MAR. 1985
FOR THE STATE OF ARIZONA*									
Manufacturing	391.38	395.50	384.17	40.6	40.9	41.0	9.64	9.67	9.37
Aircraft & Missiles	INA	INA	INA	INA	INA	INA	INA	INA	INA
Food & Kindred Products	382.53	384.99	329.66	41.0	41.0	40.8	9.33	9.39	8.08
Primary Metals	517.93	545.81	509.20	40.4	41.1	40.9	12.82	13.28	12.45
Machinery	347.38	339.29	335.02	38.9	38.6	39.6	8.93	8.79	8.46
Copper Mining	572.00	563.70	580.32	41.3	40.7	41.9	13.85	13.85	13.85
Construction	414.17	429.44	414.28	33.3	35.2	35.5	12.43	12.20	11.67
Utilities	587.20	592.04	565.50	43.4	43.5	43.5	13.53	13.61	13.00
Retail Trade**	241.33	237.38	229.44	33.8	33.2	33.3	7.14	7.15	6.89
Wholesale Trade	381.14	377.39	367.49	39.9	39.6	39.6	9.55	9.53	9.28

* Preliminary

** Excludes eating and drinking places.

NOTE--These estimates are based on a sample of full and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

--Prepared by Labor Market Information, Research and Analysis (1972 SIC, 1/86)

1986 Poverty Income Guidelines

The Department of Health and Human Services issued new poverty income guidelines on February 11, 1986. The guidelines listed below reflect changes in the Consumer Price Index. These poverty income guidelines are used as an eligibility criterion by a number of federal programs including the Job Training Partnership Act (JTPA).

The definitions used in determining "family size" and "income" are derived for the most part from language used by the U.S. Bureau of the Census "Current Population Reports." Prior to 1981, there was a distinction between poverty guidelines for farm families and nonfarm families. The poverty guidelines given below are applicable to both farm and nonfarm families.

By definition, a "family" is a group of two or more persons related by birth, marriage, or adoption who reside together; all such related persons are considered members of one family. If a household contains more than one family, the poverty guidelines are applied separately to each family, and not to the household as a whole.

A "family size of 1" is a person 15 years old or over (other than an inmate of an institution) who is not living with any relatives. Examples of unrelated individuals residing with others include a lodger, a foster child, a ward, or an employee.

"Income" refers to total annual cash receipts before taxes from all sources. These receipts include money wages and salaries before any deductions, but do not include food or rent in lieu of wages. They also include net receipts from nonfarm or farm self-employment such as receipts from a person's own business or farm after deductions for business or farm expenses.

Income also includes regular payments from social security, railroad retirement, unemployment compensation, strike benefits from union funds, veterans' benefits, public assistance including Supplemental Security Income, training stipends, alimony, child support, private pensions, regular insurance or annuity payments, income from dividends, interest, rents, royalties, periodic receipts from estates or trusts, and military family allotments or other regular support from an absent family member or someone not living in the household.

"Income" for eligibility purposes does not include capital gains, any assets drawn down as withdrawals from a bank, the sale of property, a house, a car, tax refunds, gifts, lump-sum inheritances, one-time insurance payments, or compensation for injury. Also excluded are non-cash benefits such as the employer-paid or union-paid portion of health insurance, food or rent received in lieu of wages, the value of food or fuel produced and consumed on farms, the imputed value of rent from owner-occupied nonfarm or farm housing, and such federal programs as Medicaid, food stamps, and public housing.

Jeff Bowman

Poverty Income Guidelines for All States
(except Alaska and Hawaii)

Family Size	Poverty Level
1	$ 5,360
2	$ 7,240
3	$ 9,120
4	$11,000
5	$12,880
6	$14,760
7	$16,640
8	$18,520
For Each Additional Person Add	$ 1,880

Better Educated Work Force Turns to Government for Statistics Supply

One of the great strengths of the American economy is its highly trained workers. We may not be cheap, but we are well-educated.

Currently, one-fourth of all adult workers (ages 24 to 64) have a college degree, and about one-sixth have at least some college training.

If present trends continue, by 1995 half of the adult labor force will have at least some college-level schooling.

This has not always been so. As recently as 1970, only 14 percent of adult workers had a college degree and only another 12 percent had completed one to three years of college.

Since 1970 the entire work force has grown 39 percent, but the number of college graduates in the work force has increased 144 percent. During the same period, workers without a high school diploma declined 36 percent.

With this increase in college-educated workers has come more administrative, managerial, and professional workers.

If the raw materials of a manufacturing worker are metals and fuels, then the raw materials of a college-trained office worker are information and statistics. For many years, the federal government has taken steps to assure a continuing flow of raw materials to our basic manufacturing industries. Federal agencies stockpile strategic metals, have oil reserves, and policies that encourage domestic production.

But because of the swiftness with which American workers have moved from the factory to the office, the strategic importance of information is not yet as evident. Fortunately, there are no significant foreign sources of information.

Unfortunately, the largest supplier of statistics is the federal government. The figures quoted above, for example, came from the Bureau of Labor Statistics' Research Summaries described in its Monthly Labor Review.

This rather dry compilation and brief explanation of labor force research conducted by the bureau staff is, in fact, an important production of information that has many purposes. Consider just these three:

- A would-be entrepreneur can find in these trends opportunities for serving the growing population of office workers with everything from a cold lunch to a copy service.
- A personnel manager can use the data to develop training programs and spot future labor supply problems.
- Advertising or marketing managers can see in these figures a more sophisticated and better-read consumer who may respond to more informative messages about products and services.

There are hundreds of other cases, but the point is always the same: If knowledge is power, information is opportunity. The wide distribution of inexpensive data on workers and markets provides everyone the opportunity to participate in this information-dominated society. The restriction or a sharply higher cost of such information is now as damaging to our economy as the restriction or rapid price increase of any other raw material.

The Office of Management and Budget, which as we know confronts a truly outrageous deficit problem, is considering eliminating the Monthly Labor Review. If it is successful, this miniscule savings of $150,000 will be offset by billions of unseen losses from a less efficient economy trying to operate without timely information. That is no way to cure a deficit.

Peter Francese

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New Developments

"New Developments" is featured each month as a service to employers and job seekers. It is a compilation of public announcements of the more significant new construction, grand openings, major hirings and layoffs, and other employer events that have special significance for Arizona labor markets. The announcements are paraphrased and otherwise edited from articles published in newspapers and other periodicals from throughout the state. "New Developments" are limited to space available, and no attempt is made to compile an exhaustive list of all such events that have occurred during the month.

CONSTRUCTION - Ground was broken recently on Glen-Harbor Business Park, the largest industrially-zoned project in Maricopa County. The 416-acre master-planned project is located at the northwest corner of Orangewood and 107th Avenue in Glendale. Valued at more than $400 million at buildout, it will include industrial, office, hotel, and retail uses. Glen-Harbor is a joint venture development of Kenland Development Company, Phoenix, and Del E. Webb Commercial Properties Corporation.

Construction has begun on Hayden Square Office Centre, an $11 million project that will open up an additional 74,000 square feet of office and retail space in Old Town Tempe, plus parking for more than 900 cars. Located on the west side of Mill Avenue between Third and Fifth streets, Hayden Square Office Centre is actively preleasing, with available suites ranging from 1,000 square feet to an entire floor at 15,000 square feet. "At present, the estimated 160,000 square feet of commercial space from Third Street to Sixth Street along Mill Avenue in downtown Tempe is completely occupied," says John Benton, managing partner for the project. "This new building will add approximately 50 percent more leasable space and First Class A offices to the area." Hayden Square Office Centre is part of the $25 million Hayden Square mixed-use condominium, retail, and office project scheduled for completion late this year.

Construction has begun on the 10.2-acre second phase of the Gainey Ranch Financial Center in Scottsdale, with Prudential Property and Casualty Insurance Company signing as the major tenant. Designed by Cormoyer-Hedrick Architects & Planners, Phoenix, the second phase is comprised of two two-story buildings totaling approximately 110,000 square feet. Located at 7333 East Doubletree Ranch Road, east of Scottsdale Road, the second phase is valued at about $24 million. Prudential, presently located at 5111 North Scottsdale Road, will relocate its western regional service office, Scottsdale field claim office, and 320 employees upon completion of the second phase in December. Prudential will initially occupy approximately 60,000 square feet. When complete, the Gainey Ranch Financial Center will total approximately 190,000 square feet of offices plus two contiguous one-acre parcels for smaller, freestanding buildings.

Plans to develop the Phoenix Airport Hilton have been announced with the hotel to be owned and developed by Hallmark Ventures, Incorporated and managed by Metro Hotels. Located on six acres, one-half mile from the new east entrance of Phoenix International Sky Harbor Airport, the four-story hotel will offer 262 rooms including 23 individual suites, 8,730 square feet of meeting and banquet space, a restaurant, nightclub, and health club. Phoenix Airport Hilton is part of the Phoenix Airport Center, a 60-acre master-planned business center which will include research, office, and light industrial facilities. Construction is expected to be completed in January 1987.

The Maricopa Community College District Governing Board has accepted a bid by Joe E. Woods, Incorporated of Mesa, for the construction of the Northeast Valley Education Center--the future greater Paradise Valley Community College. The campus will be located on a 90-acre site on the southeast corner of 32nd Street and Union Hills Drive. The initial phase of construction calls for 10 buildings with a total of 175,000 square feet.

The 53,000 square-foot Learning Resource Complex will house a library, media center, learning assistance center, and microcomputer labs. Other buildings will include classrooms, laboratories, administrative offices, a student and community building, a fitness center, and a child care center. Construction is scheduled for completion in March 1987.

The 23-story United Bank Tower officially became the tallest building in Tucson in late February when, during a topping off ceremony held to mark the historic event, the last structural steel beam for the building's roof was put into place. The 230,000 square-foot tower will cost approximately $25 million when complete, according to Jim Llamas, vice president of Reliance Development Group Incorporated of New York, developer of Tucson City Center, a $150 million construction project in downtown Tucson, of which the United Bank Tower is part. He said that while the larger Tucson City Center will take at least five years to complete, the United Bank Tower will be finished by late fall. Ann Narcisian, public relations officer for United Bank, said "This (the tower) is part of the revitalization process. People are beginning to have faith again in the downtown area."

The first phase of development at Continental Ranch, a 2,800-acre community near Interstate 10 and West Cortaro Farms Road in Tucson began recently with construction of the Crescent Hotel of Tucson, the Phoenix-based hotel announced. The 280-room hotel, to be located on 28 acres, has been designed for a mix of about 35 percent leisure travelers and 65 percent corporate conferences and group meetings, according to Nikolaus O. Klotz, Crescent's president and chief executive.

The $28 million hotel, scheduled for completion next spring, will have two restaurants, about 10,000 square feet of meeting space, and will include a ballroom, four tennis courts, and a 4,000 square-foot health club. The buildings will vary in height from one to three stories. When fully developed, Continental Ranch will have nearly 6,000 housing units to accommodate about 14,000 residents. Commercial and industrial development is also scheduled for the site.

McDonnell Douglas Helicopter Company's expansion at the northwestern corner of Higley and McDowell in Mesa is in the final months of construction. The $100 million expansion will house the company's headquarters, which will be moved from Culver City, California. The new buildings include an advanced-development center and a 340,000 square-foot structure designed for 1,000 employees. East of it are a three-story engineering center, a 278,000 square-foot structure for 1,500 employees, and a 268,000 square-foot, three-story headquarters building for 1,100 people. To the north of these structures are a 23,000 square foot cafeteria, a 22,000 square-foot addition to the central building, and a 250,000 square-foot addition to the material center. Employees are to begin moving into the buildings this summer.

McDonnell Douglas has more than 3,000 employees in the Valley at present. Its current facility, which lies to the north of the expansion, totals 500,000 square feet. It was opened in 1983.

Work began the second week in April on a development to be called The Grove at Black Canyon, a $100 million, 18.25-acre mixed-use center north of Peoria Avenue and east of Interstate 17. It will feature an eight-story hotel and three office buildings. Phase I--a four-story, 100,000 square-foot office building valued at $13 million--is expected to be finished in December.

Treaccor Realty and Development Corporation plans to begin work on the infrastructure for its Northsight mixed-use development at Pima and Thunderbird roads in Scottsdale. Phase I will consist of 160 acres and phase II is planned for 141 acres. The project will include about 400,000 square feet of office space, and the company says it is negotiating with major hotel chains for a proposed 250-room hotel. A retail component is also planned.

Dave Warren, a spokesman for Treaccor, said that about 47 acres of the first phase will be leased to a major employer. "Northsight I and II will be the only area in north Scottsdale where a major employer wants to be located," he said. "It is really the only place where someone has an opportunity for a really large parcel." Development plans call for a 10-acre park and 200 feet of landscaped buffer for adjoining neighborhoods.

More than $165 million in new resorts and other inns are to open in Tucson this year in yet another burst of rapid expansion for the tourism industry. The number of Tucson hotel rooms is expected to grow by 1,000 both this year and next year for a total of more than 14,000 rooms. That would be up more than 40 percent from the 10,000 rooms in Tucson in 1984, according to the Arizona Office of Tourism.

New lodgings on line include:

Stouffer Oro Valley Resort--east of La Canàda Drive between Lambert Lane and Naranja Drive, this resort will feature 500 rooms, including 34 suites, and 32,000 square feet of meeting rooms. The estimated cost is more than $80 million.

Rancho Del Rio Hotel--on Sabino Canyon Road between Tanque Verde and Cloud Road next to the Tack Room, the hotel will have 162 rooms--mostly suites--and 8,400 square feet of meeting rooms. The projected cost is $30 million.

Crescent Hotel of Tucson--mentioned earlier, this hotel will have 219 of its 280 rooms open late this year. The cost is approximately $28 million.

Tucson Hilton--at East Broadway and Prudence, this hotel will have 239 rooms and 13,000 square feet of meeting rooms at a cost of $20 million.

Viscount Suite Hotel--located at 4855 East Broadway, this hotel will feature 216 suites with 3,600 square feet of meeting rooms. Construction is expected to cost more than $10 million.

In addition to the $165 million of new resorts and hotels under construction, Tucson also has had another four hotels open for business in the city since August of 1985. These include:

The Westin La Paloma--with 410 guest rooms, a presidential suite, 24 suites, 23 meeting rooms totaling 42,000 square feet, and an 18,500 square-foot ballroom, this resort opened in February at a total cost of $100 million.

Radisson Suite Hotel Tucson--has 310 suites and 12,400 square feet of meeting rooms. It opened last December and cost $24 million.

Hotel Park Tucson--has 217 rooms of which 136 are suites, and five meeting rooms covering 10,191 square feet. It opened in August 1985 at a cost of $22 million.

The Residence Inn--last of the recently opened hotels, it features 128 suites and 1,150 square feet of meeting rooms at a cost of $11 million.

The Tucson International Airport projects that 5 million passengers will arrive and depart annually by 2000. In 1985, passenger traffic at the airport was up 16 percent over 1984, with a total of 2.4 million passengers boarding or departing.

Pat Ziarnik, director of marketing and sales for the Metropolitan Convention & Visitors Bureau, says that having "a wide variety of hotels and resorts in a wide variety of styles offers tourists, convention delegates, and businessmen a choice based on what they want to accomplish, their pocketbooks, and the area of Tucson they want to be in." Still, "we need to pull back now, or at least give Tucson a year or two to have demand catch up with the availability," he says. He cites Scottsdale and Houston as examples of cities that have overbuilt hotels and resorts, and now offer reduced rates to draw guests.

In Tucson, fewer apartment complexes, office complexes, and shopping centers are being built as independent units. Rising land prices and a desire for long-term control of their projects are leading developers to form what they describe as "planned community cores." In the urban fringe it is the same, but on a bigger scale. Large developers, suddenly strengthened by outside venture capital that Tucson found hard to attract until it reached the 500,000 population level, are creating self-sufficient communities for both blue-chip and blue-collar families.

The small-scale versions are on major arterials in built-up areas. These are the planned communities cores, or sections of a city that have been deliberately developed with a mix of retail, commercial, service, or residental uses. On a larger scale, developers are ringing the urban fringe with projects that offer jobs, homes, shopping, and services at the doorstep. These projects are also providing the land for smaller builders who cannot afford massive tracts or their holding costs. At least 35 planned developments including industrial, commercial, and residential uses are in the works. They include:

Continental Farms--a proposed community of 50,000 residents east of Interstate 19 and across from Green Valley.

Rancho Vistoso--a proposed 14 square-mile community of 42,000 residents west of Catalina State Park near North Oracle Road.

Rocking K Ranch--a 5,400-acre planned community 20 miles southeast of downtown Tucson in the Rincon Valley. Developers say it is too early to tell how many residents can be expected.

Continental Ranch--a 2,800-acre planned development for 15,000 to 28,000 residents north of Ina Road near I-10.

Midvale Park--the first of the large-scale planned communites, consisting of 1,300 acres for 15,000 residents near I-19 and West Valencia Road.

Senesac--a 1,000-acre community for 8,000 residents bounded roughly by Naranja Drive to the north, Linda Vista Road to the south, Hartman Road to the east, and Camino Horizonte to the west.

La Reserve--1,200 acres for 3,000 residents at the northwestern base of Pusch Ridge.

Ventana Canyon--a 1,000-acre development for 3,000 residents near Sabino Canyon and Sunrise roads.

Large-scale developers have turned to such communities because home buyers are demanding a secure lifestyle where they would not have to fear zoning changes. Developers are buying the land in massive amounts as a hedge against rising land prices and stricter government regulations that are pushing up house prices.

MANUFACTURING - Technibilt, a leading manufacturer of 31 different models of shopping carts, announced that it will open an assembly and distribution center in Yuma. The company plans to employ about 50 people by September and serve 11 Western states. Yuma's location will permit overnight deliveries to a majority of the company's West Coast customers, according to Charles Little, general manager of the new operation.

Len Fuller, executive director of the Yuma Economic Development Corporation, noted that 50 employees could result in an estimated $490,000 aggregate personal income, an additional $368,000 in retail sales, 16 additional non-manufacturing jobs, and two new retail establishments. By the second year, combined total aggregate income and retail sales as a result of the plant are projected to exceed $1 million.

LAYOFFS - Honeywell Incorporated's Large Computer Products Division in Phoenix laid off 250 employees at the end of April, according to James Bloom, vice president and division general manager. He said, "While we continue to expect some strengthening in computer markets in the second half of the year, we must reduce operating expenses to maintain our competitive position in the long term." Honeywell employs 4,950 in Phoenix, including 2,950 with the Large Computer Products Division.

Arizona Labor Market Newsletter
LABOR MARKET INFORMATION PUBLICATIONS
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ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. X No. 6
June 1986

Unemployment Rate

Seasonally Adjusted
April*

ARIZONA	6.5%
Maricopa Co.	5.1%
Pima Co.	5.6%
UNITED STATES	7.1%

Consumer Price Index

National-April
1967 - Base Year

Wage Earner/Clerical Worker -	320.4
% Chg. Yr. Ago	1.2
All Urban -	325.3
% Chg. Yr. Ago	1.6

Phoenix-1st Qtr. 1986
1977 - Base Year

All Urban -	191.6
% Chg. Yr. Ago	2.0

Tucson-1st Qtr. 1986
1st Qtr. 1983 - Base Qtr.

All Urban -	115.7
% Chg. Yr. Ago	2.2

* Preliminary

Labor Turnover Update

A New Source of Information

Arizona's labor turnover study provides new information about the labor market by analyzing the movement of wage and salary workers in and out of employment status with respect to an individual establishment during a quarter. These movements (or turnover) of workers are an important indication of the performance of the state economy. They offer new insight to labor market analysts, researchers, job training organizations, and anyone else who wants to keep track of the dynamics of the labor market.

The movement into employment status may occur as a result of new hires or rehires by individual establishments, and movement out of employment status could be the result of separations (quits or layoffs) from individual establishments. The Arizona labor turnover study, which has been completed recently by the Arizona Department of Economic Security (DES) Research Administration, counted these movements between 1982 and 1985. This article, however, makes an in-depth time-series and cross-sectional analysis of the movement of workers into and out of employment status in the manufacturing and service industries only.

The analysis is done with the aid of turnover indicators rather than actual number of workers moving into or out of a particular establishment. After making a comparison within and between two industries in terms of turnover rates, the article proceeds to discuss some of the implications of the turnover information. In doing so, the article also identifies the high and

Arizona Department of Economic Security

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Arizona Labor Market Information Newsletter
WINNER OF THE ICESA 1985 LMI PUBLICATION AWARD

Nancy Augustin, editor
Processed by RA Clerical Support Unit

low turnover industries based on new hire rates. Quarterly labor turnover data on movement of workers to different statuses are generated by computer manipulation of the Unemployment Insurance Base Period Wage (UIBPW) file and the Employer Name and Address (ENA) file. Both of these files are generated by the Arizona Department of Economic Security in cooperation with the U.S. Bureau of Labor Statistics (BLS). The UIBPW file contains records defining each employer-employee relationship during the past five quarters. Only employees covered by Unemployment Insurance (UI) during the past five quarters will have records on their file. Fortunately, more than 95 percent of Arizona workers are covered by the UI statutes, which makes the data base of labor turnover a near-perfect replica of the actual movement of laborers.

Wage information from the UIBPW file and name and address information from the ENA file are utilized to provide a number of different turnover measures. The various turnover measures are derived by comparing the social security numbers of employees working for a given employer in a given quarter with the social security numbers reported by the same employer in the past five quarters. Using this methodology, the following measures have been derived.

Beginning of Quarter Employment: Total count of employees who have received wages during the current quarter and the previous quarter from the same employer.

New Hires: Total number of employees who received wages from an employer during the current quarter, but received none from the same employer during any of the four previous quarters.

Rehires: Total number of employees who received wages from an employer during the current quarter, received no wages from that employer in the preceding quarter, but received wages from that employer in at least one of the other three previous quarters.

Accessions: Total number of employees receiving wages from an employer during the current quarter who received none from that employer in the immediately preceding quarter (i.e, Accessions = New Hires + Rehires).

Separations: Total number of employees who received no wages from an employer during the current quarter, but received wages from the same employer in the preceding quarter.

The definition of new hire has an arbitrary cutoff point of four quarters that is used to determine if the employee is a new hire or a rehire. The longer the period used to define the new hire, the more costly the process of computing the series and the shorter the time-series available. For example, if wage records data are available for five years, and if a new hire is defined as "did not work for that employer in the previous 20 quarters," no new hire data will be defined until the 21st quarter's data becomes available. Even then, only one quarter of new hire data could be reported. Using too few quarters will result in overcounting of new hires who worked for the same employer previously. Going back four quarters has the advantage of eliminating as new hires seasonal workers who work for the same employer one season a year.

The wage records, however, do not distinguish between quits versus layoffs, and both of these are treated together as separations from an individual establishment.

The Arizona labor turnover study reveals that for each 100 jobs covered by unemployment insurance in the state, approximately 150 persons were hired during both 1984 and 1985. In 1985 alone, there were 1,463,247 accessions recorded against an average of 1,001,533 total wage and salary employment. To give an indication of the size and importance of various measures of turnover, a summary table (Table 1) was prepared recording the annual rates of accession and new hires to employment by major industrial categories. The ratio of accessions to employment per 100 positions in 1985 varied from a low of 35 in mining to a high of 259 in construction and 175 in trade. The rapidly declining mining ratio since 1982 was caused by the declining trend in this industry due to depressed demand in metal markets. The exceptionally high ratio in construction in any year results largely from seasonality and the project basis of work assignments. The relatively high ratio in trade is influenced by the low wage level characteristic of employees in that industry.

Table 1 also suggests an enormous number of new hires every year--almost as great as the number of employed workers. However,

Table 1

Arizona
Annual Accession and New Hire Rates
By Industry, 1982-1985

		Annual Accession Rate Per 100 Employment	Annual New Hire Rate Per 100 Employment
Mining	1982	108.3	59.2
	1983	78.4	46.7
	1984	43.3	35.2
	1985	34.9	29.9
Construction	1982	200.3	178.0
	1983	254.4	231.6
	1984	244.7	223.5
	1985	259.4	235.6
Manufacturing	1982	61.1	47.3
	1983	79.0	65.6
	1984	94.7	79.5
	1985	94.0	73.2
TCPU*	1982	55.6	44.7
	1983	68.6	59.6
	1984	96.7	87.7
	1985	78.2	64.8
Trade	1982	138.6	120.9
	1983	153.6	139.0
	1984	179.3	163.9
	1985	174.5	156.6
FIRE**	1982	66.9	57.4
	1983	92.0	76.7
	1984	89.9	76.8
	1985	99.7	84.2

Table 1 - Continued

		Annual Accession Rate Per 100 Employment	Annual New Hire Rate Per 100 Employment
Services	1982	120.8	99.9
	1983	134.7	114.3
	1984	161.0	129.1
	1985	154.7	131.9
Public Administration	1982	63.5	48.8
	1983	71.5	45.3
	1984	45.6	40.0
	1985	68.8	50.0

* TCPU = Transportation, Communications, and Public Utilities
** FIRE = Finance, Insurance, and Real Estate

SOURCE: Arizona Department of Economic Security, Research Administration.

few industries account for more than a proportionate share of these new hires. The new hire rate ranges from 29.9 percent in mining to 235.6 percent in construction. The construction rate implies that there were 135.6 percent more new hires during 1985 than the construction employment level at the beginning of 1985.

The difference in new hire rates across industries can be explained by differences in average firm size. It is expected that the greater the firm size, the lower the new hire rate, since large firms tend to have lower turnover (i.e., they are probably more apt to smooth their employment over the business cycle). In addition, the larger the percentage of employment in high turnover nonmanufacturing industries, the higher the overall new hire rate. On the other hand, new hire rates across counties can be explained by differences in countywide unemployment rates.

To get a more detailed picture of the industries with high and low turnover, Table 2 presents some of the extremes in 1985. The high turnover industries are mainly agriculture, construction, services, and retail trade. The low turnover industries are largely the mining, utilities, banking, and high technology manufacturing industries. The highest turnover industries are consistently high in each quarter of 1985 and before. The low turnover industries are also consistently low in every quarter of turnover data.

However, it would be wrong to assert that all the manufacturing industries are low turnover industries. To show this, the manufacturing industries are broken down by two-digit Standard Industrial Classification (SIC) codes. Quarterly new hire rates of these two-digit SICs are then compared with the average industry rate. Table 3 shows that transportation equipment (SIC 37) and electrical and electronic machinery and supply (SIC 36) post a lower new hire rate than the overall manufacturing rate. On the other hand, the furniture and fixtures (SIC 25) industry records a relatively high turnover rate compared to the average. The high turnover in this industry is caused, in large part, by the high new hire rate in construction.

Similarly, it would be wrong to assume that all the service industries are high turnover industries. By breaking the service industry into two-digit SIC codes, the quarterly new hire data reveal that health services (SIC 80) has a relatively lower turnover rate than the average. (See Table 4.) But interestingly enough, health services has a greater than average turnover

Table 2

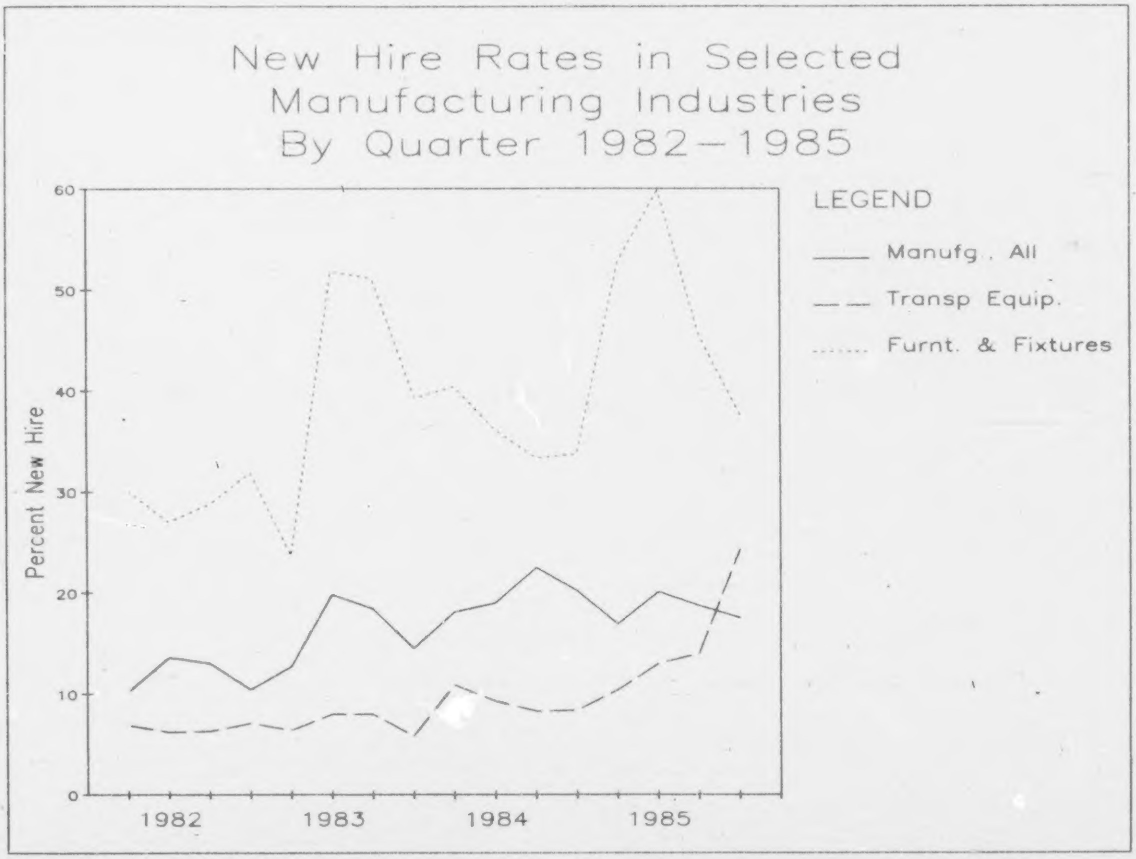
Arizona
Accession and New Hire Rates in 1985
By Two-Digit Industry (High and Low Turnover)
Industries with Employment Greater Than 1,000

Industry	New Hire Rate Per 100 Employees	Accession Rate Per 100 Employees
Low Turnover		
Metal Mining	22.83	27.93
Electric, gas, and sanitary services	29.78	44.41
Electrical and electronic machinery, equipment, and supplies	33.23	42.05
Banking	34.57	41.32
Communications	39.08	45.42
Educational services	47.47	64.87
Measuring, analyzing, and controlling instruments	53.82	132.84
Machinery, except electrical	57.17	88.43
Security and commodity brokers, dealers, exchangers, and services	60.61	71.51
Chemicals and allied products	61.69	68.54
Transportation equipment	62.15	120.01
Insurance	63.87	74.66
Primary metal industries	67.27	91.26
Transportation by air	74.46	82.22
Legal services	78.06	101.39
High Turnover		
Building materials, hardware, garden supply, and mobile home dealers	136.33	150.90
Miscellaneous retail	137.28	153.59
Furniture, home furnishings, and equipment stores	138.05	154.40
Social services	141.47	162.45
Food and kindred products (manufacturing)	143.22	184.22
Lumber and wood products, except furniture	146.54	163.21
Automotive dealers and gasoline stations	151.11	164.03
Personal services	156.52	181.35
Real estate	158.45	182.88
General merchandise stores	158.72	190.07
Apparel and accessory stores	163.27	177.74
Automotive repair, services, and garages	173.14	188.47
Amusement and recreation services, except motion pictures	180.00	229.73

Table 2 - Continued

Industry	New Hire Rate Per 100 Employees	Accession Rate Per 100 Employees
Hotels, rooming houses, camps, and other lodging places	193.06	214.98
Furniture and fixtures (manufacturing)	195.90	227.00
Construction other than building construction--general contractors	207.05	228.58
Motion pictures	229.64	260.23
Building construction--general contractors and operative builders	233.66	255.89
Construction--special trade contractors	243.91	269.59
Eating and drinking places	249.50	272.11

Source: Arizona Department of Economic Security, Research Administration.



rate than the overall manufacturing industry. All these data point out that turnover rates are definitely industry-specific. The further we break down the industry, the better and more accurate the information we get about that industry.

The facts about hiring patterns in Arizona revealed by the turnover data have an impact upon a variety of areas:

1. New hire data indicate the pattern of hiring by industry and area.

2. New hire data can be used as a factor in allocating federal funds for Job Service activities.

3. New hire data can be used by job developers to determine the firms with the greatest potential for applicant hiring. Seasonal patterns and trends derived from Employment Service Potential (ESP) data can help Job Training Partnership Act (JTPA) and Establishment Survey (ES-202) development efforts.

4. A possibly important future use of turnover data would be to estimate occupational employment opportunities by a method different from the current estimation process used by the Occupational Employment Statistics (OES) program.

5. To the extent that occupational information can be incorporated into ESP measures, training programs can be designed based on information on hiring patterns.

6. The data can provide internal management information for U.S. Department of Labor programs. It can help with local office location decisions, setting placement goals, measuring performance, and validating placement information.

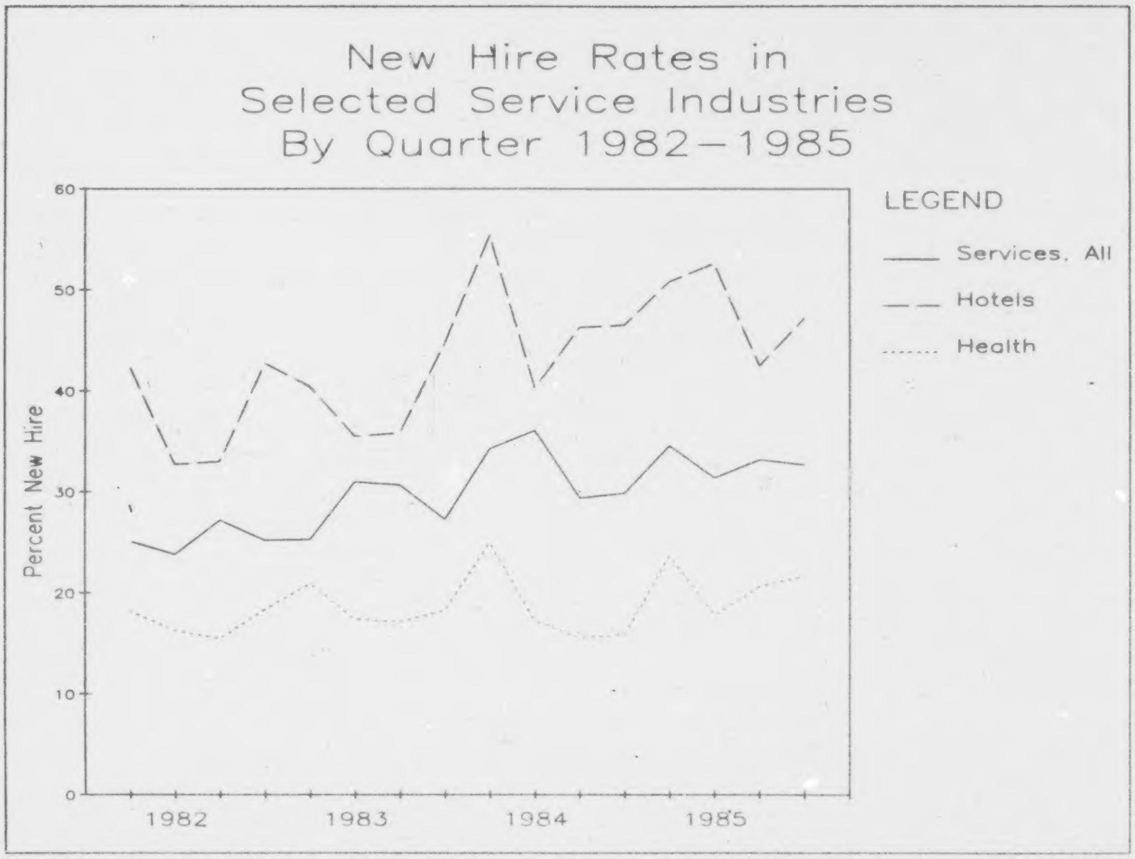
7. A number of economic hypotheses can be tested with this body of data pertaining to such theories as primary and secondary labor markets, the relationship between low wages and turnover, and turnover over the business cycle.

Table 3

Arizona
New Hire Factor in Selected
Manufacturing Industries
By Quarter, 1982-1985

		Manufacturing All	Transportation Equipment SIC 37	Electrical & Electronic Machinery & Supply SIC 36	Furniture & Fixtures SIC 25
1982	Q1	10.2	6.9	3.8	30.1
	Q2	13.6	6.2	8.2	27.0
	Q3	13.0	6.3	7.9	28.8
	Q4	10.4	7.1	3.9	31.9
1983	Q1	12.7	6.4	6.7	23.6
	Q2	19.8	8.0	12.5	51.6
	Q3	18.4	8.0	12.6	51.1
	Q4	14.5	5.8	11.3	39.3
1984	Q1	18.1	10.9	13.7	40.4
	Q2	19.0	9.3	13.8	36.1
	Q3	22.5	8.3	16.9	33.3
	Q4	20.2	8.4	10.8	33.7
1985	Q1	16.9	10.4	9.8	52.8
	Q2	20.1	13.0	8.3	59.8
	Q3	18.7	14.0	8.0	45.5
	Q4	17.5	24.3	7.0	37.6

SOURCE: Arizona Department of Economic Security, Research Administration.



As outlined in Number 4, one important use of turnover data would be to estimate occupational employment opportunities differently than the current OES estimation process. Under the current program, total job openings represent the number of openings due to growth of the industry and separations from the labor force. They do not account for labor turnover (i.e., openings created when a worker changes jobs, leaving the job to be filled by someone else). These vacancies are often the largest source of job openings. Job opportunities, however, vary among industrial divisions, which largely depend on turnover rates. It is also important to note that, within an industry, job opportunities are unique to a particular occupation. Unfortunately, the technique to estimate occupational-specific turnover has yet to be developed. In this study, industry turnover rates are used which are applied equally to all occupations within that industry. Secondly, the average new hire rates for a particular industry in 1985 are assumed to be realized in 1986-87.

Estimated job opportunities based on turnover data for transportation equipment (SIC 37)--a high technology industry--are projected for 1986-87 and then compared with the job opportunities based on industry growth and separations from the labor force. This particular industry has often been determined a low turnover industry, as the new hire and accession rates are consistently at very low levels. Even so, the total job opportunities in 1986-87 resulting from turnover and growth and separations are estimated to be greater than the job opportunities based only on growth and labor force separations. Table 5 lists the estimates of 22 occupations with the largest employment opportunities from growth, separations, and turnover.

Thus, wage records constitute a vast resource of labor market information. Arizona labor turnover data are tabulated by industry, by county, and by state. Based on preliminary examination of the wage records data, the potential of these data appears to be great. The DES Research Administration has recently completed a project on turnover using data from 1982-1984. We are interested in receiving user comments on these turnover studies. Please write to the address on the back of this Newsletter or call (602) 255-3871.

Jalal Ahmad

SOURCES: "Arizona Labor Turnover: A Significant Reality," A Labor Market Information Publication of the Arizona Department of Economic Security, March 1986.

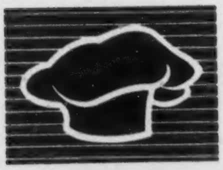
"ESP: A New Source of Labor Market Information," by Malcolm S. Cohen, Co-Director of Research, Institute of Labor and Industrial Relations, University of Michigan and Wayne State University, October 1978.

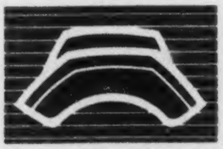
Table 4

Arizona
New Hire Factor In
Selected Service Industries
By Quarter, 1982-1985

		Services All	Hotels SIC 70	Personal Services SIC 72	Business Services SIC 73	Health SIC 80
1982	Q1	25.1	42.4	38.0	50.8	18.2
	Q2	23.8	32.7	31.8	60.3	16.3
	Q3	27.2	33.0	37.6	58.7	15.5
	Q4	25.2	42.7	37.7	50.6	18.4
1983	Q1	25.3	40.4	43.5	54.8	20.9
	Q2	31.0	35.5	39.0	67.6	17.4
	Q3	30.7	35.8	38.4	66.7	17.1
	Q4	27.3	44.7	40.3	56.3	18.3
1984	Q1	34.3	55.4	44.6	80.7	25.0
	Q2	36.1	40.3	40.4	68.9	17.3
	Q3	29.4	46.3	42.6	60.1	15.6
	Q4	29.9	46.5	42.8	66.8	15.9
1985	Q1	34.6	50.8	40.5	65.9	23.7
	Q2	31.4	52.6	38.9	71.8	17.7
	Q3	33.2	42.5	37.4	71.6	20.7
	Q4	32.7	47.2	39.8	68.4	21.7

SOURCE: Arizona Department of Economic Security, Research Administration.





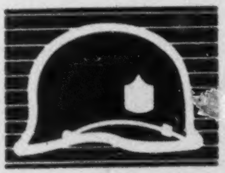


Table 5

Arizona
1986-87 Estimates of 22 Occupations with Largest Employment Opportunities from Labor Turnover in SIC 37

Occupation	Estimated 1986 Employment	Job Opportunities --Growth and Separations	Job Opportunities Based on Turnover	Total Job Opportunities
Aeronautical and astronautical engineers	1,375	123	90	213
All other managers and administrators	1,142	161	16	177
Industrial engineers excluding safety	1,125	130	44	174
Electrical and electronic engineers	1,115	149	24	173
Mechanical engineers	1,027	111	48	159
Machine tool cutting operators/ tenders--metal and plastic	986	87	66	153
First line managers/supervisors-- production and operations	921	96	47	143
Machinists	797	96	28	124
Precision inspectors, testers, and graders	793	81	42	123
Production inspectors, testers, and graders	661	77	25	102
Secretaries	646	91	9	100
All other engineers and related technicians	643	67	33	100
Electrical and electronic assemblers	580	81	9	90
Production planning and expediting clerks	566	57	31	88
Machine builders and assemblers	529	80	2	82
General office clerks	547	43	42	85
Mechanical engineering technicians	503	70	8	78
Electromechanical equipment assemblers-precision	483	70	5	75
General managers and top executives	468	47	26	73
All other management support workers	389	47	13	60
Purchasing agents, excluding wholesale/ retail/farm	373	43	15	58
Assemblers/fabricators--excluding machinery, electronic, and precision	363	37	19	56

SOURCE: Arizona Department of Economic Security, Research Administration.

Arizona Unemployment Insurance Activities - March 1986

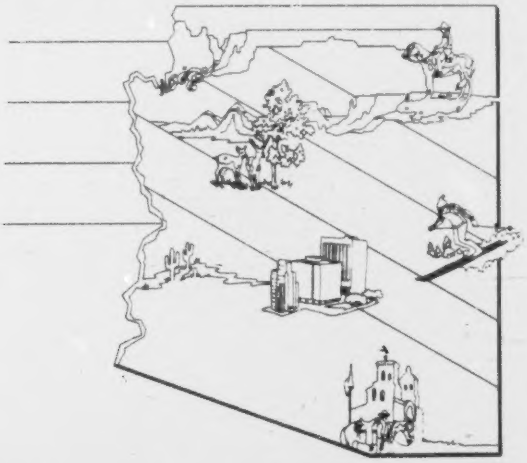
	March 1986	February 1986	March 1985	% Change From One Year Ago
Arizona Claimants Served*	30,409	28,442	28,698	+ 6.0%
Arizona Average Weeks Unemployed**	8.7	8.8	8.7	0.0%
Arizona Benefits Paid*	$ 9,979,272	$ 9,087,413	$ 9,284,576	+ 7.5%
Arizona Trust Fund Balance	$332,103,583	$338,877,174	$245,896,002	+35.1%

*All Programs **UI Only

The Arizona Labor Force in April

For the fourth consecutive month, Arizona's unemployment rate was unchanged at 6.5 percent. But that apparent stability masks changes that local economies are undergoing. In Maricopa County and in nine rural counties, the unemployment rate fell; while in Pima County and three rural counties, the unemployment rate rose. While the state unemployment rate of 6.5 percent is clearly below the national average of 7.1 percent, internal changes are also at work nationally. A little over a year ago, only four or five other states had lower unemployment rates than Arizona. Today this distinction is shared by 17 states. Clearly the changing composition of the national economy has had an impact on Arizona, and in the months ahead those forces will become more apparent.

Two areas of expected strength for our economy in the months ahead are tourism and construction. For the state's northern counties, the expectation that summer tourism activity will be particularly strong is encouraging. Lower gasoline prices and concern over travel outside the United States is expected to boost local activity. Combined with an expected increase in foreign tourism that is the result of a falling dollar, tourism should help the state to record very good economic activity in the months ahead.



And in construction, lower interest rates are causing employment to rebound. After suffering declining employment levels for eight months, the recovery which began modestly last month is apparently gaining strength. A total of 2,300 jobs were added in construction during April as residential and road building activity quickened. Most of that gain was in Maricopa County, but excellent prospects for growth were evident throughout the state. Employment gains would actually be greater if it were not for offsetting losses in commercial and multi-family housing. But those losses are expected to continue, thus keeping employment growth moderate.

Along with those areas of strength, Arizona continues to be plagued by job losses in manufacturing and mining. Many people felt that at the beginning of this year, copper mining employment had fallen to 9,000 and would likely remain stable. But in a matter of only four months, employment has fallen nearly 10 percent and further losses are expected. In December 1974, employment in this industry reached its peak at 25,200. Now fewer than four out of every 10 jobs remain.

The situation in manufacturing, though not as bleak, remains discouraging. Job gains that were recorded in March were nearly completely lost in April. Electronics employment is down nearly 10 percent from its peak in late 1984. The employment gains of aerospace companies are clearly slowing and will not likely offset continued losses in electronics manufacturing. Notwithstanding the weak conditions in copper mining, the weakness being experienced by the state's electronics firms is the darkest cloud over our economy.

The economy, while growing sufficiently to create jobs for our expanding population, is not creating enough to cause unemployment to fall. The pressures to push unemployment upward appear to be greater than those causing it to fall. But the balance is such that increases in the foreseeable future should be small. The economy is marking time in anticipation of a change. At this point the question is whether the change will be upward or downward.

Dan Anderson

Arizona Labor Force and Employment

April 1986 (in thousands)

	ARIZONA				
				-- Amt Change --	
	Apr.* 1986	Mar. 1986	Apr. 1985	Mar. to Apr.	1985 to 1986
TOTAL CIVILIAN LABOR FORCE**	1571.7	1551.2	1472.6	+20.5	+99.1
Total Unemployment	99.9	99.4	95.0	+0.5	+4.9
Rate	6.4	6.4	6.5	---	---
Rate (Sea. Adj.)***	6.5	6.5	6.6	---	---
Total Employment	1471.8	1451.8	1377.6	+20.0	+94.2

The Above Labor Force Statistics Should Not B

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	Apr.* 1986	Mar. 1986	Apr. 1985	Mar. to Apr.	1985 to 1986
TOTAL WAGE AND SALARY	1343.3	1335.0	1278.7	+8.3	+64.6
Manufacturing	181.2	181.5	179.5	-0.3	+1.7
Durable Goods	142.8	142.8	142.6	+0.0	+0.2
Stone, Clay and Glass	7.9	7.9	8.0	+0.0	-0.1
Primary and Fabricated Metals	16.3	16.3	17.2	+0.0	-0.9
Primary Metals	7.9	7.9	7.7	+0.0	+0.2
Fabricated Metals	8.4	8.4	9.5	+0.0	-1.1
Machinery	64.2	64.5	69.7	-0.3	-5.5
Other Durable Goods	54.4	54.1	47.7	+0.3	+6.7
Aircraft and Missiles	26.3	26.2	21.1	+0.1	+5.2
Lumber and Wood Products (Except Furniture)	7.5	7.4	7.1	+0.1	+0.4
All Other Durable Goods	20.6	20.5	19.5	+0.1	+1.1
Nondurable Goods	38.4	38.7	36.9	-0.3	+1.5
Food and Kindred Products	8.8	8.9	8.0	-0.1	+0.8
Apparel	4.7	4.8	4.6	-0.1	+0.1
Printing and Publishing	14.8	14.8	14.1	+0.0	+0.7
All Other Nondurable Goods	10.1	10.2	10.2	-0.1	-0.1
Mining and Quarrying	10.7	11.2	12.1	-0.5	-1.4
Copper Mining	8.2	8.7	9.5	-0.5	-1.3
Other Mining and Quarrying	2.5	2.5	2.6	+0.0	-0.1
Construction	112.9	110.6	109.7	+2.3	+3.2
Trans., Communications, and Public Utilities	64.5	63.9	62.5	+0.6	+2.0
Transportation	28.9	28.7	28.9	+0.2	+0.0
Communications and Public Utilities	35.6	35.2	33.6	+0.4	+2.0
Trade	334.4	332.0	311.5	+2.4	+22.9
Wholesale Trade	65.5	65.1	63.1	+0.4	+2.4
Retail Trade	268.9	266.9	248.4	+2.0	+20.5
General Merchandise and Apparel	40.4	40.1	39.0	+0.3	+1.4
Food Stores	40.4	40.2	36.9	+0.2	+3.5
Automotive and Service Stations	32.3	32.0	30.0	+0.3	+2.3
Eating and Drinking Places	100.0	98.9	90.4	+1.1	+9.6
Other Retail Trade	55.8	55.7	52.1	+0.1	+3.7
Finance, Insurance, and Real Estate	88.9	88.1	79.1	+0.8	+9.8
Services and Miscellaneous	319.9	316.2	298.9	+3.7	+21.0
Hotels and Other Lodging Places	32.6	32.6	30.6	+0.0	+2.0
Business Services	72.2	71.4	66.1	+0.8	+6.1
Health Services	77.8	77.7	73.6	+0.1	+4.2
Other Services	137.3	134.5	128.6	+2.8	+8.7
Government	230.8	231.5	225.4	-0.7	+5.4
Federal	41.0	40.9	41.2	+0.1	-0.2
State and Local	189.8	190.6	184.2	-0.8	+5.6
School	113.8	114.2	112.9	-0.4	+0.9

* Preliminary

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

NOTE--Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment

April 1986 (in thousands)

MARICOPA COUNTY					PIMA COUNTY				
			-- Amt Change --					-- Amt Change --	
Apr.* 1986	Mar. 1986	Apr. 1985	Mar. to Apr.	1985 to 1986	Apr.* 1986	Mar. 1986	Apr. 1985	Mar. to Apr.	1985 to 1986
975.5	964.8	908.2	+10.7	+67.3	310.0	305.9	292.0	+4.1	+18.0
48.7	50.6	46.1	-1.9	+2.6	16.8	16.1	16.4	+0.7	+0.4
5.0	5.2	5.1	---	---	5.4	5.3	5.6	---	---
5.1	5.3	5.2	---	---	5.6	5.3	5.8	---	---
926.8	914.2	862.1	+12.6	+64.7	293.2	289.8	275.6	+3.4	+17.6

Used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

Apr.* 1986	Mar. 1986	Apr. 1985	Mar. to Apr.	1985 to 1986	Apr.* 1986	Mar. 1986	Apr. 1985	Mar. to Apr.	1985 to 1986
884.9	879.7	829.4	+5.2	+45.5	245.6	244.7	233.3	+0.9	+12.3
128.8	128.8	130.3	+0.0	-1.5	32.8	33.1	30.9	-0.3	+1.9
102.8	102.6	104.7	+0.2	-1.9	27.6	27.8	26.0	-0.2	+1.6
4.9	4.8	4.8	+0.1	+0.1					
10.6	10.7	11.4	-0.1	-0.8					
50.4	50.6	55.7	-0.2	-5.3					
36.9	36.5	32.8	+0.4	+4.1					
26.0	26.2	25.6	-0.2	+0.4	5.2	5.3	4.9	-0.1	+0.3
5.5	5.6	5.4	-0.1	+0.1					
2.9	2.9	2.9	+0.0	+0.0					
10.7	10.7	10.3	+0.0	+0.4					
6.9	7.0	7.0	-0.1	-0.1					
0.6	0.6	0.6	+0.0	+0.0	1.6	2.1	2.4	-0.5	-0.8
78.6	76.8	77.1	+1.8	+1.5	22.0	21.7	20.8	+0.3	+1.2
42.2	42.0	40.5	+0.2	+1.7	9.4	9.2	9.4	+0.2	+0.0
19.7	19.6	19.5	+0.1	+0.2	4.5	4.4	4.4	+0.1	+0.1
22.5	22.4	21.0	+0.1	+1.5	4.9	4.8	5.0	+0.1	-0.1
230.3	228.8	212.7	+1.5	+17.6	55.0	54.6	51.3	+0.4	+3.7
52.4	52.0	50.0	+0.4	+2.4	7.6	7.5	7.2	+0.1	+0.4
177.9	176.8	162.7	+1.1	+15.2	47.4	47.1	44.1	+0.3	+3.3
26.3	25.9	25.0	+0.4	+1.3	7.0	7.1	7.2	-0.1	-0.2
25.8	26.0	23.6	-0.2	+2.2	6.9	6.7	6.0	+0.2	+0.9
20.6	20.5	19.1	+0.1	+1.5	5.6	5.5	5.0	+0.1	+0.6
66.4	65.8	59.1	+0.6	+7.3	18.4	18.1	16.6	+0.3	+1.8
38.8	38.6	35.9	+0.2	+2.9	9.5	9.7	9.3	-0.2	+0.2
69.8	69.2	61.8	+0.6	+8.0	12.6	12.6	11.4	+0.2	+1.4
218.0	216.3	203.0	+1.7	+15.0	59.8	59.5	55.4	+0.3	+4.4
18.7	19.0	18.0	-0.3	+0.7	5.8	6.0	4.9	-0.2	+0.9
59.0	58.4	54.3	+0.6	+4.7	10.5	10.4	9.2	+0.1	+1.3
52.3	52.2	48.9	+0.1	+3.4	16.1	16.1	15.6	+0.0	+0.5
88.0	86.7	81.8	+1.3	+6.2	27.4	27.0	25.7	+0.4	+1.7
116.6	117.2	113.4	-0.6	+3.2	52.2	51.9	51.7	+0.3	+0.5

-- Prepared by Labor Market Information, Research and Analysis (CPS, 1/86)

Nonmetropolitan Counties
Labor Force and Employment
April 1986

	Apache	Cochise	Coconino	Gila	Graham	Green-lee	La Paz
TOTAL CIVILIAN LABOR FORCE*.	15,200	35,625	39,425	12,425	7,950	2,975	4,625
Total Unemployment	2,525	2,875	3,400	1,900	875	300	725
Rate	16.6%	8.1%	8.6%	15.3%	11.0%	10.1%	15.7%
Rate (Seas. Adj.)**. . . .	18.0%	8.3%	8.9%	15.4%	11.0%	9.7%	-INA-
Total Employment	12,675	32,750	36,025	10,525	7,075	2,675	3,900

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Apache	Cochise	Coconino	Gila	Graham	Green-lee	La Paz
TOTAL WAGE AND SALARY. . . .	14,600	24,700	35,325	9,850	4,775	2,775	2,675
Manufacturing.	725	2,100	2,775	1,300	175	0	100
Mining and Quarrying	25	125	25	1,225	0	1,675	0
Construction	925	1,275	1,650	425	125	125	125
Trans., Comm., & Pub. Util..	1,675	1,675	2,950	400	150	50	50
Trade.	1,450	5,350	7,925	1,875	1,250	275	875
Fin., Insur., & Real Estate.	275	700	775	275	125	25	100
Services and Miscellaneous .	4,325	3,750	8,500	1,850	850	75	650
Government	5,200	9,725	10,725	2,500	2,100	550	775

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL CIVILIAN LABOR FORCE*.	27,375	25,875	34,850	9,000	32,775	38,175
Total Unemployment	2,675	3,425	4,125	925	2,300	8,450
Rate	9.8%	13.2%	11.8%	10.3%	7.0%	22.1%
Rate (Seas. Adj.)**. . . .	9.9%	14.0%	12.1%	12.5%	6.9%	-INA-
Total Employment	24,700	22,450	30,725	8,075	30,475	29,725

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL WAGE AND SALARY. . . .	18,425	19,450	26,375	8,275	21,600	23,925
Manufacturing.	2,375	1,775	3,150	1,100	2,225	1,725
Mining and Quarrying	275	1,100	3,400	0	575	50
Construction	1,300	1,025	1,375	350	2,050	1,575
Trans., Comm., & Pub. Util..	1,075	1,525	900	500	950	925
Trade.	5,175	3,675	4,925	3,375	5,425	7,475
Fin., Insur., & Real Estate.	925	350	700	250	925	925
Services and Miscellaneous .	3,850	5,250	2,900	1,200	4,550	4,375
Government	3,450	4,750	9,025	1,500	4,300	6,875

*Adjusted to the Current Population Survey (CPS) to reflect place of residence.
**Seasonal adjustment not applicable for economic assistance programs.

NOTE--Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs
April 1986

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,571,676	1,471,760	99,916	6.4%
Apache	15,189	12,672	2,517	16.6
Cochise	35,625	32,760	2,865	8.0
Coconino	39,417	36,026	3,391	8.6
Gila	12,403	10,514	1,889	15.2
Graham	7,349	7,073	870	10.9
Greenlee	2,974	2,684	290	9.8
La Paz	4,624	3,909	715	15.5
Maricopa	975,468	926,814	48,654	5.0
Mohave	27,368	24,696	2,672	9.8
Navajo	25,880	22,443	3,431	13.3
Pima	309,379	293,168	16,811	5.4
Pinal	34,830	30,716	4,114	11.8
Santa Cruz	9,004	8,068	936	10.4
Yavapai	32,794	30,484	2,310	7.0
Yuma	38,174	29,721	8,455	22.1

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators. Note: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Estimated Hours and Earnings of Production Workers in Selected Industries in Arizona
April 1986

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVG. HOURLY EARNINGS		
	APR.* 1986	MAR. 1986	APR. 1985	APR.* 1986	MAR. 1986	APR. 1985	APR.* 1986	MAR. 1986	APR. 1985
FOR THE STATE OF ARIZONA*									
Manufacturing	402.94	393.16	384.74	41.2	40.7	40.8	9.78	9.66	9.43
Aircraft & Missiles	INA	INA	INA	INA	INA	INA	INA	INA	INA
Food & Kindred Products	385.29	383.80	362.08	42.2	41.9	42.9	9.13	9.16	8.44
Primary Metals	510.37	519.16	510.72	38.9	39.6	39.9	13.12	13.11	12.80
Machinery	362.87	348.16	332.28	39.4	38.9	39.0	9.21	8.95	8.52
Copper Mining	576.28	572.00	589.24	40.9	41.3	42.3	14.09	13.85	13.93
Construction	461.45	414.49	437.41	37.7	33.4	37.1	12.24	12.41	11.79
Utilities	651.48	588.56	570.26	44.5	43.5	43.9	14.64	13.53	12.99
Retail Trade**	239.91	239.57	233.31	33.0	33.6	33.0	7.27	7.13	7.07
Wholesale Trade	378.07	377.78	366.83	39.3	39.6	39.7	9.62	9.54	9.24

* Preliminary
** Excludes eating and drinking places.
NOTE--These estimates are based on a sample of full and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

--Prepared by Labor Market Information, Research and Analysis (1972 SIC, 1/86)

Permanent Mass Layoffs and Plant Closings

The Research Administration of the Arizona Department of Economic Security has contracted with the Bureau of Labor Statistics (BLS), U.S. Department of Labor, to collect data on mass layoffs in Arizona. The program is known as Permanent Mass Layoffs and Plant Closings (PMLPC) and has been in existence since 1985. The program was developed in response to the large number of layoffs that have occurred as a result of import competition, the 1982 recession, and the relocation of facilities within the U.S. and overseas. It is hoped that this information can be used to identify dislocated workers and develop programs to retrain them for the types of jobs that will be available in the future. The program consists of three main sections: 1) the identification of PMLPC employers and those persons separated from the firm, 2) the identification of continued claimants, and 3) the identification of claimmants who exhaust their benefits.

Identification of PMLPC Employers

Identifying a mass layoff would appear to be rather simple. One occasionally sees reports in the media of firms announcing major staff reductions. It would seem that it would be a rather simple matter to go out and count the number of people laid off. In reality, however, the number of people filing claims for Unemployment Insurance (UI) and the announced intentions of a firm can vary substantially. Also, many firms never announce staff reductions to the public. So how do you determine when a mass layoff has occurred? BLS decided that the best method of determining a mass layoff was by using UI records.

The second issue involved in determining if a mass layoff has occurred is what is the definition of "mass." This issue is probably the most frequently discussed among the states that are participating in the PMLPC program. Several alternatives suggest themselves: 1) any firm that has x number or more claims filed against them in a certain time period, 2) a certain percentage of a firm's workforce that files a claim, or 3) a combination of options 1 and 2. BLS decided that a mass layoff occurred if 50 or more valid initial UI claims were filed against a firm in a three-week period. Some states have been unhappy with this definition, and since the program is in its infancy, the criteria might change over time. The biggest problem encountered with this definition is handling large firms. For example, if XYZ Corporation employs 10,000 people, it may be extremely easy for it to meet the PMLPC criteria. For this reason, the analyst in charge of the program can drop employers from the program if the claimant activity is viewed as insignificant for the size of the employer.

Once a firm is identifed as a PMLPC employer, the UI records of the people filing claims against them are written to a separate computer file. This file contains such information as date of claim, race, sex, address, age, and occupation. These data will hopefully provide insights as to how to design retraining programs, where these programs might be needed, and what kinds of skills these people currently possess versus what they might need.

Secondly, after a PMLPC firm is identifed, an effort is made to contact the firm in order to determine the exact size of the layoff, the date of the layoff, why the layoff occurred, and if any recall date has been determined. On the whole, employer response has been favorable.

Employers were contacted by telephone as soon as possible after being identified as PMLPC employers. Initially, we attempted to obtain information for an entire quarter. However, we soon learned that employers resisted searching their records for such a long time period. Furthermore, recalling data from as long ago as four months sometimes proved difficult. These problems were resolved by switching to a monthly format.

Most firms were cooperative when contacted, although a few were initially skeptical when questioned about layoffs. Two firms who decided not to participate in the beginning have since become quite willing to provide us with information. The excellent participation and cooperation we have received from employers has been and will be an important factor in determining the success of the PMLPC program.

Identification of Continued Claimants

Another purpose of the program is to identify the duration of unemployment experienced by people involved in mass layoffs. For this reason, the number of people continuously separated from the PMLPC firm who filed a claim for the week containing the 12th of the month is recorded. This week was selected because it is also the reference week for other BLS programs. The claimant's county of residence is also recorded, further enabling the identification of depressed geographic areas. A count is also made of the continued claimants who had no earnings due to employment.

Identification of Exhaustees

The final section of the program is the identification of people who exhaust their UI benefits. This provides further insights into unemployment duration and the kinds of people who might need retraining. High exhaustion rates can be an indication of the lack of availability of work, although there are numerous reasons why people exhaust UI benefits.

Examination of the Data

This section will provide a brief overview of some of the data gathered in 1985. Time and space limitations do not permit a detailed examination at this time. However, further data will be released as it becomes available..

In 1985, there were 20,248 PMLPC initial claimants from 86 firms in Arizona. Of these firms, the vast majority are still operating in the state. Employer contacts revealed that many of the layoffs were the result of seasonal fluctations or temporary closures. These findings would tend to provide support for a more restrictive definition of a mass layoff.

Chart 1 displays the distribution of claimants by industry. Clearly, manufacturing was the largest source of PMLPC layoffs, followed by agriculture and construction. The agriculture industry is a prime example of the difficulties involved in separating seasonal layoffs from permanant layoffs. Virtually all layoffs in agriculture occurred in the first quarter--i.e, the end of the harvest season in southern Arizona. This finding is further supported by Chart 2, which shows Yuma County as the second largest source of PMLPC initial claimants.

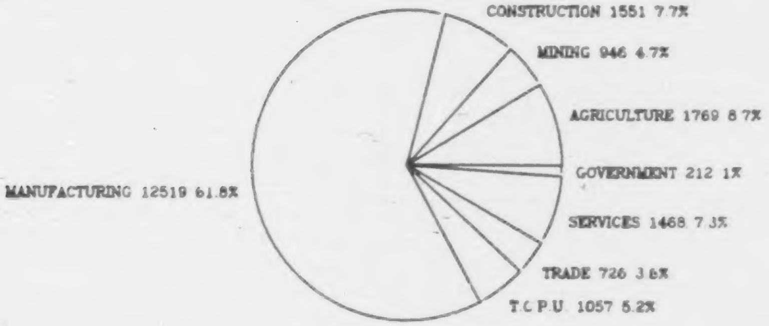
The agricultural industry provides probably the most interesting results in the preliminary analysis of last year's data. In examing Chart 1, we see that agriculture accounted for 8.7 percent of initial claims. Yet 16.5 percent of continued claims and 28.2 percent of exhaustees were in agriculture. This indicates that agricultural workers have a hard time finding employment. This could be due to several factors such as lack of skills, lack of job opportunities, or lack of job search. This result is also supported by the data in Table 1. Agriculture has both the highest continued claim rate and exhaustion rate.

As mentioned above, manufacturing had the largest number of initial claims. However, many of these layoffs proved to be extremely short. This point is illustrated by the industry's continued claims rate and exhaustion rate, both of which are the lowest of any industry. Note that the continued claims rate is below one, which means that some initial claimants never filed a continued claim.

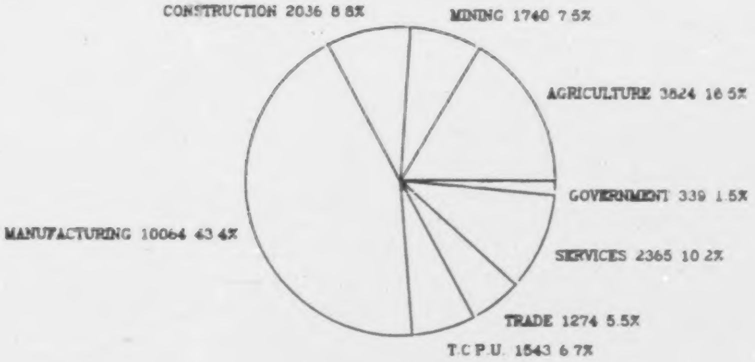
Another point of interest is the high continued claims rate for the mining industry. It would appear that workers laid off from this industry found it relatively more difficult to find a job than did claimants from other industries, with the exception of agricultural workers. This is a good example of the type of information the program was designed to gather, i.e., identifying potentially dislocated workers.

A close examination of Chart 1 reveals one other interesting fact. Note the absence of any claimants from the finance, insur-

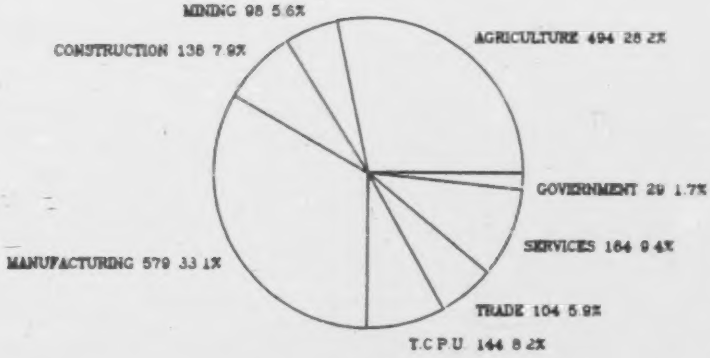
CHART 1
PMLPC CLAIMANTS IN ARIZONA, 1985 BY INDUSTRY



INITIAL CLAIMS

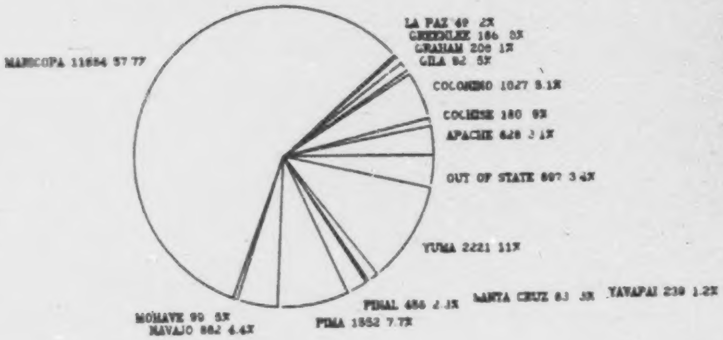


CONTINUED CLAIMS

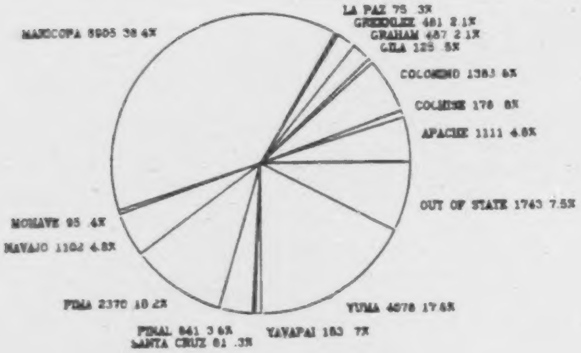


EXHAUSTEES

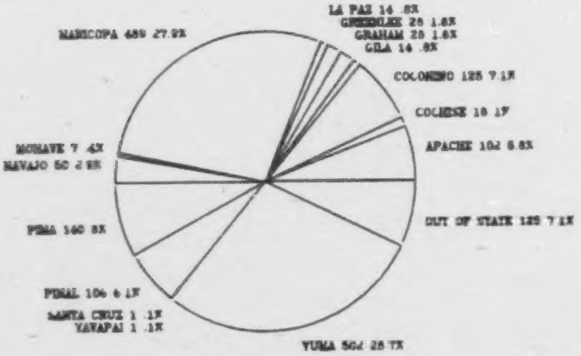
CHART 2
PMLPC CLAIMANTS IN ARIZONA, 1985
BY COUNTY



INITIAL CLAIMS



CONTINUED CLAIMS



EXHAUSTEES

Table 1

	Continued Claim Rate*	Exhaustion Rate**
Agriculture	2.162	.279
Mining	1.839	.104
Construction	1.313	.089
Manufacturing	0.804	.046
TCPU	1.460	.136
Trade	1.755	.143
Services	1.611	.112
Government	1.599	.137

* Continued claims divided by initial claims
** Exhaustees divided by initial claims

ance, and real estate industry. This could be the result of several factors such as the tremendous employment growth that occurred in the industry in 1985 (11.8 percent), and the relatively small number of firms that employ over 50 people and would therefore be able to qualify as a PMLPC employer.

Summary

The initial examination of some of the data gathered by the PMLPC program has provided some insights into mass layoffs. Clearly the program is in its infancy, and it will take several years of data in order to draw more exact conclusions about the nature of mass layoffs and the behavior of PMLPC claimants. Also, since the program is so new, it will take time to iron out problems and implement improvements. In the long run, the program has the potential to provide a wealth of information for policy makers, vocational educators, and academics.

David Sinclair
Aggie Toombs

1986 Occupational Employment Survey of Manufacturing and Hospital Industries

For the eleventh consecutive year, members of the Department of Economic Security Research Administration staff will be contacting certain Arizona employers for the purpose of updating occupational data by industry.

The Occupational Employment Statistics (OES) program is a federal-state cooperative triennial program to determine current occupational employment and to estimate demand for occupational skills by industry.

In 1985, the Research Administration staff will collect data from the manufacturing and hospital industries.

The OES staff has, over the last three years, successfully surveyed nearly 16,000 firms with more than 800,000 employees. Employers are asked through personal interview or mailout questionaire to provide a count of their employees by occupation. The cooperation of Arizona's businesses and industries has contributed to survey response rates consistently over 85 percent--thus ensuring more reliable projections of our state's manpower needs.

When the surveying is completed, the information is tabulated and organized to furnish a clear representation of the occupational makeup of all Arizona industries. It is this information that is needed to develop an employment outlook for the years ahead--that is, what jobs are going to be in demand and what jobs are disappearing. Employment information developed by the OES program has established itself as an integral part of Arizona's education and manpower planning efforts.

If you would like more information on the OES program, or would like to receive copies of the Occupational Profiles which summarize survey results, telephone 255-3876. Outside the Phoenix metropolitan area, but within Arizona, call 1-800-321-0381.

Donna Poggensee

New Developments

"New Developments" is featured each month as a service to employers and job seekers. It is a compilation of public announcements of the more significant new construction, grand openings, major hirings and layoffs, and other employer events that have special significance for Arizona labor markets. The announcements are paraphrased and otherwise edited from articles published in newspapers and other periodicals from throughout the state. "New Developments" are limited to space available, and no attempt is made to compile an exhaustive list of all such events that have occurred during the month.

EDUCATION - The eleventh annual Arizona Vocational Education Conference will be held at the Phoenix Civic Plaza from July 30 to August 2, 1986. The theme for this year's conference is "Leadership for Change," and the conference is funded by the Arizona Department of Education and supported by the Arizona Department of Economic Security. Sessions will be held in a number of occupational areas including employment and training. For additional information, contact the Northern Arizona University (NAU) Center for Vocational Education toll-free at 800-628-3863.

The Pima County Educational Group Effort, an adult education lab funded by the Arizona Department of Education and begun in November 1985, helps economically disadvantaged young people between the ages of 17 and 21, or others with barriers to employment (e.g., single parents, dropouts, youth offenders, or people with learning disabilities) work on their specific deficiencies outside of the traditional classroom setting. According to project director, Candace Ver Brugghen, the program was initiated for people who need to improve their reading, vocabulary, or math skills to prepare them for vocational or academic schooling, full-time employment, or the armed services. "If students have one weakness, let's say reading, we do not go into other areas. We work on their deficiencies." Ver Brugghen added that the pilot program has been successful, with only five students having dropped out of the 45 enrolled. She said, "All the students are here because they want to be, and they have a direction when they leave. They learn at their own pace, and they like that."

POPULATION - Arizona's population pattern somewhat resembles a revolving door, according to a recent study by the Arizona State University Bureau of Business and Economic Research. To the question--if you are a young, well-educated, white-collar professional, are you likely to be moving into Arizona or moving out?--the answer is yes. Yes, bright young professionals are being drawn to the state. And yes, many of the same types already here are finding reasons to leave. From 1975 through 1980, the most recent years for which there are complete migration figures, Tom Rex (bureau chief) says 598,000 people moved to Arizona but 353,000 left. Some people come to settle in and stay. But most of them--especially the younger set--are on the move enough to characterize Arizona's population as a largely transient group. "Older people who move here tend to stay, but a tremendous amount of (the) younger population leaves," Rex says.

CONSTRUCTION - The first phase of construction began in late April on the Granite Gate Resort on 25 acres near Prescott. It will be the first full-service resort and conference center in the area. The 133-suite project is located in the weather-smoothed rocks of the Granite Dells, three miles north of Prescott on Route 89. It will feature tennis courts, swimming and lap pools, horseback riding, hiking trails, an exercise room, and retail shops. The 5,800 square feet of conference facilities includes a main ballroom with meeting space for 350 and banquet space for up to 275 people. The exterior will be detailed with stone and wood surfaces to blend with the rock formations of the area. The resort is slated for a July 1 opening.

Construction of Forest Highlands, a 653-acre planned residential community in Flagstaff, is scheduled to begin in July. Located six miles south of Flagstaff and east of U.S. Highway 89A, the estimated value of the project at build-out is expected to be more than $200 million. Comprised of 515 single-family lots and 140 "cluster units," Forest Highlands will have as its centerpiece an 18-hole golf course designed by the architects for Scottsdale's new Tournament Players Course and the course at Troon Village. A family-oriented, full-service clubhouse, swimming pool, and tennis facilities are planned, along with neighborhood parks, biking and jogging paths.

University Towers at Arizona State University, scheduled for completion in July, was topped off at the beginning of April by Kitchell Contractors. The project consists of two eight-story student residences and a four-story parking garage. The towers will house 700 students, offering access to private living areas, student activities with a full-time director of student affairs, food services, monthly planned events, and sporting areas. The first floor of the north tower will include retail outlets serving university students. University Towers is located west of Sun Devil Stadium at 525 South Forest.

The northeast corner of River and Craycroft roads will be the site of River Center, Tucson's newest retail center. The $12 million project is being developed by a wholly owned subsidiary of the Venture West Group Incorporated, whose other development activities include the Tucson City Center, a $150 million office and commercial complex in downtown Tucson. River Center will feature a gourmet Alpha Beta and Walgreens on the 15-acre site, along with a variety of specialty shops and services. Total area for retail space is 124,773 square feet.

Val Vista Lakes, a community being developed at Val Vista Drive and Baseline Road in Gilbert, will in three to five years be home to somewhere between 8,000 and 12,000 people. Five major home builders have gathered together--in the fashion of many large housing developments today--in order to fit a lot of different home buyers' pocketbooks. There will be casitas starting in the $50s, single-family homes from the $80s, luxury townhomes from the $140s, and custom-built homes. There will be 75 acres of lakes, which will be filled with excess water from spring runoffs. A centerpiece of the development is the not-quite-complete Beach & Racquet Club valued at more than $6 million. Also on the drawing board are four shopping centers, restaurants, doctors' and dentists' offices, banks, and fire stations.

Ground breaking ceremonies were held May 3 for a senior citizen's housing complex in Springerville being built within walking distance of the White Mountain Communities Hospital. Set for completion in early 1987, the complex will consist of 32 efficiency and one bedroom apartments and will include laundry and meeting rooms as well as four apartments for handicapped residents. Samaritan Health Service, which operates the hospital, also approved a plan to build a 45-bed skilled nursing facility on the hospital's campus.

Koll Construction Company has begun construction services for the $6.1 million equestrian facilities at Horseman's Park, located north of the Central Arizona Project Canal and east of Pima Road in Scottsdale. James Suft, vice president and head of Koll Construction, says his company will build the main 4,500-seat show area, in addition to six working arenas, 480 permanent stalls, 10 barns, two polo fields, four wash racks, and 32 public comfort stations at Horseman's Park--considered to be one of the largest private or public equestrian facilities in the West. The project is expected to be completed by September. Infrastructure site work on 200 acres at the park is currently underway.

Mountain Bell announced May 1 that it will consolidate operations of more than a dozen metropolitan offices into a 20-story office complex to be built on the northeastern corner of Central Avenue and Thomas Road in Phoenix. Costs of the project were not made public. Donald Cline, vice president, said construction of the 541,000 square-foot complex could begin as early as June 1987 and that an estimated 2,000 employees would move in between September 1988 and December 1989. He said the company will retain its present general office tower at 3033 North Third Street, but will abandon 13 other offices--10 in Phoenix and one each in Tempe, Mesa, and Glendale. Those operations will move into the new building.

MANUFACTURING - Foster Grant Corporation announced at the end of April that it would open a manufacturing and distribution plant in Tucson that will employ about 200 people within a year of opening. The company expects the new plant to begin production and distribution by the first of July and to be fully operational within a year, according to William V. Stephenson, executive director of the Tucson Economic Development Corporation, which has been working with the sunglasses manufacturer since November 1983. The company will close its current plant in Leominister, Massachusetts, upon opening the new facility in Tucson. The facility will include a fully computerized and automated warehouse, electronic data processing and order entry, and a customer service department. Mr. Stephenson noted that because the company is not involved in high-technology manufacturing, it will broaden Tucson's manufacturing base, making it less susceptible to fluctuations in the high-tech industry.

Arizona-Tech Assemblies Incorporated, an electronics assembly firm, opened a Tucson plant on June 1 and will hire 125 local people--mostly electronic assemblers--within the first year. The new firm is to operate out of an existing 30,000 square-foot building at 3151 East Drexel Road. They purchased that facility and are doing extensive remodeling, according to Mr. Stephenson of the Tucson Economic Development Corporation. He added that International Business Machines (IBM) Corporation will be one of the firm's major customers.

Cleveland-based Parker Hannifin has purchased 13.9 acres, 10 miles west of Phoenix's Sky Harbor Airport on Interstate 10, to build a new manufacturing plant for the company's fuel products division. The plant will be a 50,000 square-foot machining operation for quality components for the handling and control of fuel in a variety of aircraft, according to William A. Ponn, division general manager. He added, "Upon opening, the plant will employ about 100 workers, with plans to expand to 150 by the end of the first year of operation." Parker Hannifin produces a line of fluid power systems and components for industrial, automotive, space, and marine markets.

TRANSFERS - IBM Corporation in Tucson offered most of its 5,600 employees the opportunity to transfer to IBM divisions elswhere, a company spokesman said at the end of April. The six-year-old Tucson plant develops and manufactures storage media for computers. The idea is to move employees from divisions where work is slower to more vibrant areas of IBM that need extra staff, according to Ron Ash, another IBM spokesman in Tucson. Most of the job openings are in marketing, service, and engineering at locations across the country. Greg Thompson, communications manager for IBM's General Products Division, said workers who transfer from Tucson will not be replaced. But, he added, that does not indicate the computer company is having financial problems. The Tucson plant has been rumored to be IBM's location for research and development on optical-disk technology. Ash said IBM-Tucson is looking at the new technology, but he declined to comment further.

LAYOFFS - Sola-Syntex Ophthalmics Incorporated, a Phoenix manufacturer of contact lenses, announced on May 12 plans to lay off 100 of its 850 employees in an effort to return the firm to profitability. President Dick Kapash said the layoff would involve nearly all levels of employees, including production workers, supervisors, middle managers, and some support personnel. The operation had moved into a new 150,000 square-foot facility at 1100 East Bell Road in 1984, but had been losing money for several months--since Fall 1985.

Arizona Labor Market Newsletter
LABOR MARKET INFORMATION PUBLICATIONS
Site Code 733A
P.O. Box 6123
Phoenix, Arizona 85005

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ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. X No. 7
July 1986

Unemployment Rate

Seasonally Adjusted
May*

ARIZONA	6.4%
Maricopa Co.	5.0%
Pima Co.	5.3%
UNITED STATES	7.3%

Consumer Price Index

National-May
1967 - Base Year

Wage Earner/Clerical Worker -	321.4
% Chg. Yr. Ago	1.1
All Urban -	326.3
% Chg. Yr. Ago	1.6

Phoenix-1st Qtr. 1986
1977 - Base Year

All Urban -	191.6
% Chg. Yr. Ago	2.0

Tucson-1st Qtr. 1986
1st Qtr. 1983 - Base Qtr.

All Urban -	115.7
% Chg. Yr. Ago	2.2

* Preliminary

Women's Work?

One of the earliest secretaries in recorded history was the Greek, Eumenes, who served as private secretary to King Philip of Macedon and later to Alexander the Great in the 300s BC. Cleopatra had a secretary named Diomedes. Before becoming part of the explorer team of Lewis and Clark, Meriwether Lewis was private secretary to President Thomas Jefferson.* What did these secretaries have in common? They were men.

Yet according to the United States Bureau of Labor Statistics, the percentage of secretaries who are male in the U.S. today is only about 1 percent. What caused the shift in the composition of the secretarial profession from males to females? Have other occupations that are often considered "women's work" ever been considered "men's work"?

Researcher Alice Kessler-Harris has written that sharp distinctions between male and female jobs did not exist in the preindustrial society, when the tasks of all family members revolved around the household that constituted the center of production. The transition from the relatively self-sufficient domestic economy to dependence on trade took hundreds of years and developed at various speeds in different areas.

The commercial revolution of the thirteenth century created a market for manufactured goods and encouraged families to produce goods for cash. But until at least the middle of the eighteenth century, there was little market for the exchange of goods. Households continued to operate as units of production centered around self-supporting farms or artisan shops.

Arizona Department of Economic Security

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Arizona Labor Market Information Newsletter
WINNER OF THE ICESA 1985 LMI PUBLICATION AWARD

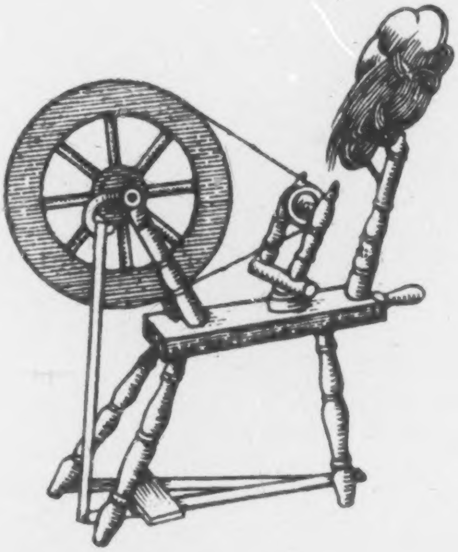
Nancy Augustin, editor
Processed by RA Clerical Support Unit

Author Barbara Mayer Wertheimer found that among the settlers in the American colonies, the home was also the factory of the day where women produced almost all that the family needed and consumed. Through their productive and managerial skills, the women determined how well their families would live. If they could produce more than their families needed, they could sell or barter the extra for additional comforts.

The woman of that time produced at home almost everything that her family used or ate. She grew much of her family's food and preserved enough to last through the winter. She made butter, cheese, bread, candles, and soap. She gathered and dried wild herbs used in food preservation and as medicines. She served as doctor, nurse, and midwife within her own family and for others. She also spun and dyed yarn that she wove into cloth and cut and hand-stitched that cloth into garments.

For women who needed paid employment, domestic service was a respected and comparatively well-paid occupation. In fact, it was a legitimate apprentice trade for a girl, enabling her to learn spinning and weaving. Many sisters and daughters of prominent citizens also did domestic work for brief periods before marriage. In addition, domestic service offered an acceptable way for spinsters to earn a living.

Since early census takers counted nurses and teachers as domestic servants, the actual number of women in paid household work is not clear, but it appears that over 80 percent of the household servants were women. This profession did not lose status until after the Revolutionary War when spinning, baking, soap making, and canning were gradually removed from the home to the factory, leaving only the unskilled housework for women domestics.



Since textiles from England were expensive and the shipments irregular, almost every woman spent as much time as she could in weaving homespun cloth. As early as 1640, the production of cloth was encouraged by court order in New England, and women ran spinning schools to train young girls and boys. Several colonies regularly assigned quotas for the production of yarn and cloth to families according to their size.

The small businesses that were started to meet the needs of the rapidly growing population were usually run by husbands and sons within their houses or on their property. They depended on their wives and daughters for additional labor. Thus the women learned to shoe horses, cut and trim tin plates, sew uppers onto leather soles, tend the store and keep the books, or operate a saw or gristmill. During the critical labor shortage of the American Revolution, women took up the trades their husbands left when they joined the army.

After the war, a new demand for finished products was created by the movement to lands beyond the Appalachian Mountains. This led to the rise of merchant capitalists who purchased raw materials and contracted for their conversion into fabric, clothing, and other goods. The manufacturing was done almost entirely in the home by women or families. The finished products were then collected by the merchant capitalists and sold to the country stores that served the new settlements. Eventually, factories began to be built, employing mostly women and children.

Beginning in the settled northeastern areas about 1790 and extending west and south over the next 50 years, manufactured products (yard goods, candles, brooms) began to replace those formerly made in the household. By 1810, a third of all fabric was produced outside the home.

The first spinning mill using machinery was opened in 1790 by Samual Slater at Pawtucket. Similar establishments followed soon after. Until the 1840s, women and children were most often selected to work in the factories because the most important concern to the manufacturers was having a regular work force. While hiring local farmers could lead to inconvenient and costly delays during plowing and harvest times, the labor of women and children could be purchased at minimal cost. Widows were most in demand, especially if they had children of working age.

According to W. Elliot Brownlee and Mary M. Brownlee, factory labor was very attractive to women because it had greater appeal than did domestic service by that time. However, as the mills drew many women away from domestic work, the wages of servants rose from 50 cents a week in 1815 to $1.25 or $1.50 a week by 1849.

Factory labor offered women a larger measure of social freedom and higher wages and status. Those incentives, however, were inadequate to lure significant numbers of men. At that time, the highly-skilled crafts were untouched by the factory system, and the new agricultural opportunities on western lands were attractive to many men.

But beginning in the 1840s, immigrants from Canada, Ireland, and Germany began to replace native-born females in the unskilled factory labor force. The immigrants were preferred because they were willing to work for lower wages, for longer periods of time, and with fewer complaints about working conditions.

Also by the 1840s, the factory system had spread to the skilled crafts. The gradual de-skilling process led to women competing against male immigrants for some of those jobs and men struggling to keep women out of those occupations. Many of those men felt that keeping women out of certain jobs was the only way of saving their own.

In 1850, women were most likely to be found in the following occupations:**

Occupation	Number of Women
Domestic Service	330,000
Clothing	62,000
Cotton Textiles	59,000
Teaching	55,000
Shoes	33,000
Wool	19,000
Hats	8,000

Changes in several industries were taking place at that time. One of those industries was shoe manufacturing. Women entered the field about 1750, sewing uppers and decorating women's slippers and shoes. That part of shoe-making became known as women's work because the women could work at home and fit the work into the household routine. The invention of the wooden shoe peg in 1811 brought both a lower-priced shoe and an even greater employment of women and children. Formerly, men shoemakers had done the heavy, more skilled work of sewing bottoms to uppers. The shoe peg meant that uppers and bottoms of lighter-weight shoes could be joined in a simple operation which employed lower-paid, unskilled women and children--resulting in a cheaper shoe.

The first sewing machine for leather was introduced in Lynn, Massachusetts in 1852. Production of hand-sewn shoes fell dramatically. Women who wanted work had to move into the factory on a full-time basis or purchase the expensive machines to use at home. The sewing machine caused a drop in the number of women in the industry as can be seen in the following table:**

	U.S Shoe Industry	
	1850	1860
Men	72,305	94,515
Women	32,949	28,515
Total	105,254	123,030

In fact, Census data show that the overall percentage of women in the U.S. labor force fell from 31 percent in 1850 to 23 percent in 1860, officially attributed to the industrial use of the sewing machine.

Actually, new machinery has been the most typical reason for substituting women for men or men for women in jobs. The textile industry went both ways in the nineteenth century. Spinning jennies, operated by women in cotton mills, were replaced in 1850 by spinning mules, heavy machines that required physical strength. The women were replaced by men. But in the 1890s, when the men were earning $12 to $14 per week and seeking higher pay, the mills took advantage of new ring-spinning machinery to replace the men with women who earned $6 to $8 per week.

When manufacturers of silk ribbons replaced hand looms operated by skilled male weavers with simpler machinery, female operators were recruited. But after high speed horizontal warping mills were developed, the women were replaced by men. It was thought that men responded better to stress.

As a result of changes in the machinery used in textiles, the relative proportions of males and females in that industry varied from region to region, also being influenced by local custom and available labor.

Another factor that contributed to the hiring of women was the scientific management that developed as a result of stiff competition in national and international markets. The demand for unskilled workers was increased by subdividing tasks and encouraging investment in labor-saving machinery. Women were thought to adapt more easily to routine work. For example, when the tasks of telephone operators were reduced to a manual of appropriate responses, operators became mostly women.

However, the rising dominance of heavy industry between 1880 and 1910 led to a hiring preference for men because Victorian attitudes were causing women to be thought of as too physically delicate for factory work. Those attitudes gained legal force through protective legislation regulating the working hours, wages, and conditions for women.

At that time, protective legislation was not directed toward men. In 1914, 27 states had some form of legislation protecting women. By 1917, 39 states had restrictions on hours. Six states had an eight-hour day and a 48-hour week for most women; 13 states had a nine-hour day and a 54-hour week. The remaining states varied their work weeks from 55 to 60 hours. Besides restricting the number of hours, there was often legislation on night work, sanitary conditions, and minimum wages for women.

That protective legislation, because it did not apply to men, had some adverse effects on women's employment as well as the obvious benefits. When it eliminiated night work for women, it deprived some women of high-skilled and well-paid jobs.

Protective legislation reduced the economic desirability of female employees. It did not pay to change the hours for a whole facility nor to keep two sets of hours. Employers could hire men and not have to deal with restrictions. Women were put into a special work category, thus encouraging a stratified work force. Fewer manufacturing jobs were 'being defined as women's work, while a variety of areas within the service sector were being seen as appropriate for women.

One of those areas was office work. Until the last part of the nineteenth century, the typical office clerk was a trusted assistant who handled the books and kept track of inventory or a personal secretary who wrote letters, kept appointments, and served as confidante. The clerk was usually a man.

The first female stenographers transcribed into longhand the shorthand notes taken in court by male court reporters. In those days, court reporting was considered inappropriate for women--in part, because of too much strain on the job and in part, because women could not be permitted to hear revolting testimony.

Rapid business growth finally widened the opportunities for women in the clerical field. Although employers were initially reluctant to hire women because they were feared to be a distracting influence, women began to be hired because they could be paid about half of what men would get. With the introduction of the commercial typewriter in 1873 and the shift-key model in 1878, business schools began training women as "typewriters" (those who operated typing machines), stenographers, and bookkeepers.

By the 1890s, the typewriter was in general use. The machine required nimble fingers, assumed to be an attribute of women. In addition, the work was clean. Large numbers of women not previously employed began looking for work. Office work was seen as sustaining women's roles by extending their home functions to the job. Women could gain experience in caring for men in the office before they had to do so at home. By the 1920s, office work was considered "women's work."

In 1900, almost 29 percent of all bookkeepers and accountants and more than 75 percent of all stenographers and "typewriters" were women. The following table illustrates the rapid growth of women in the industry:**

Women in Office Work

Year	Number of Women
1870	9,982
1880	28,698
1890	168,808
1900	238,982

Other occupations which became predominately female were retail sales, teaching, and nursing. Although some women had worked in stores in colonial days, store owners usually hired men because it was thought that women customers preferred to be waited on by men. As the young men began to be lured by the westward movement, job opportunities became available for women. The Civil War provided even more store clerk openings for women. By 1890, 20 percent of all store workers were women.

The early teachers were also men. But when towns could pay only low wages, especially after the Panic of 1837, they began hiring more women. The Civil War again contributed more job opportunities for women. In Massachusetts alone, the proportion of teachers who were male had dropped from 50 percent in 1840 to 14 percent in 1865.

Nursing also began as an occupation dominated by men. It was not until the Civil War shortage of nurses that women entered the profession in large numbers. During the Victorian era, a concept was developed of nursing as a transfer of women's duties from the home to the workplace.

Opportunities remained good for women in both teaching and nursing because neither governments nor private charities could compete with factories, farms, and shops for the labor of men.

In contrast to nursing, the first physicians in this country were women. The most common type of doctor during colonial times was the midwife. In fact, most midwives were women until about 1800, when men were being attracted in large numbers to the field by the high amounts of money to be made there. By 1840, the male midwives had obtained control of the medical schools which transformed midwifery into obstetrics. At that time, women did not have equal access to higher education so that the only opportunities for women in the medical profession were as midwives on the Western frontier.

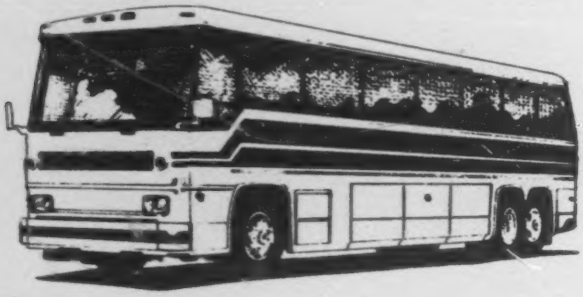
Around the turn of the century, there was an increased demand for women doctors due to the Victorian modesty which would allow a female patient to be examined only by a female doctor. That demand lasted until about 1910 when increasing costs of laboratory and hospital facilities forced some medical school closures and consolidations. Fewer schools led to fewer opportunities for women. However, women continued to predominate in the medical-related fields of physiotherapy and dental hygiene.

The Depression of the 1930s encouraged employers to streamline their operations in order to maximize efficiency. Some began to replace expensive skilled workers (men) with less expensive and less skilled workers (women). Only a few men moved into women's jobs in teaching, social work, and libraries. Men gained jobs among elevator operators, janitors, college professors, and musicians. Women gained in leather and glass production and in electrical equipment manufacturing. However, social pressure encouraged some women to give up their jobs so that men with families could have them.

Also during the Depression, the National Recovery Administration encouraged firms to get together within industry groupings and create a series of codes to regulate production, wages, and prices. Among other changes, those codes reduced the average number of hours worked for all employees to a standard of 40 hours per week and severely regulated home work. Although the codes were declared unconstitutional in 1935, they had helped encourage protective legislation for men as well as for women, thus contributing to some equality in the job market.

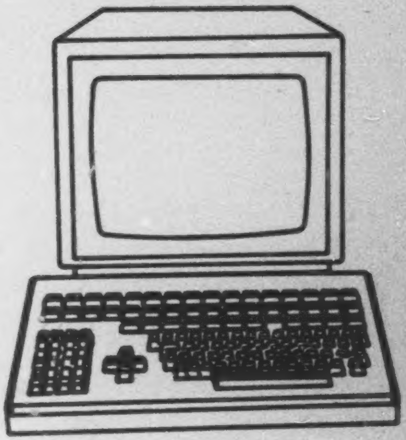
Except during World War II when women were needed to work in shipyards, steel mills, and ammunition factories, the pattern of women's work remained essentially the same until the 1970s. Even though the number of women in the labor force grew, jobs remained sex-segregated.

But during the 1970s and into the 1980s, changes started taking place. Many of the barriers (both legal and social) which restricted jobs to just one sex began to be removed. Women were becoming bus drivers and construction workers. Men were becoming nurses and secretaries. Shifts were again occurring as have happened throughout history. According to the 1980 Census, almost 22 percent of all clerical and administrative support workers and 15 percent of all registered nurses and therapists in Arizona were men. Forty percent of bus drivers were women.



The factors most responsible for shifts in the gender composition of an occupation are the available labor supply and technology. During wars, when men were not available, women were hired into jobs they otherwise would not have been hired for. The current shifts may be very different from those in the past in that both men and women are now available for jobs. Due to many reasons (fewer children, high divorce rate, etc.), more women are entering the labor force than ever before. These changes will not end in just a few years as they used to after a war ended.

Technology is also changing at a very fast pace. Personal computers, robotics, and various technological advances which occur every day will continue to have tremendous impact on the work force. However, these current shifts in gender composition may not mean substituting one sex for another. It may be that we are headed for integration--not "men's work" or "women's work," but just work.



Barbara Keene

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* Sandy Thompson, "Male Secretaries: A New Perspective," *The Secretary*, April 1985, pp. 26-27.

** Barbara Mayer Wertheimer, *We Were There* (New York: Pantheon books, 1977), pp. 61, 86, 159.

SOURCES: Kessler-Harris, Alice. *Women Have Always Worked*. Old Westbury, New York: The Feminist Press, 1981.

Kessler-Harris, Alice. *Out to Work*. New York: Oxford University Press, 1982.

Brownlee, W. Elliot and Brownlee, Mary M. *Women in the American Economy*. New Haven: Yale University Press, 1976.

Hernandez, Ruth Robinson. *Job Options for Women in the 80s*. U.S. Department of Labor. Women's Bureau, Division of Information and Publications, 1980.

The Leading 10 Occupations of Women Workers 1870-1980
(In Order Of Size and as Reported in Each Census, Regardless of Changes in Definition)

	1870	1900	1930	1950	1970	1980
1.	Domestic Servants	Servants	Other Servants, Other Domestic and Personal Service	Stenographers, Typists, and Secretaries	Secretaries	Typists
2.	Agricultural Laborers	Farm Laborers (members of family)	Teachers (school)	Other Clerical Workers	Sales Clerks (retail trade)	Secretaries
3.	Tailoresses and Seamstresses	Dressmakers	Stenographers and Typists	Saleswomen	Bookkeepers	Sales Workers (retail & personal services)
4.	Milliners, Dress and Mantua Makers	Teachers	Other Clerks (except clerks in stores)	Private Household Workers	Teachers (elementary school)	Teachers (elementary school)
5.	Teachers (not specified)	Laundry Work (hand)	Saleswomen	Teachers (elementary school)	Typists	Bookkeepers, Accounting, & Auditing Clerks
6.	Cotton-mill Operatives	Farmers and Planters	Farm Laborers (unpaid family workers)	Waitresses	Waitresses	Cashiers
7.	Laundresses	Farm and Plantation Laborers	Bookkeepers and Cashiers	Bookkeepers	Sewers and Stitchers	General Office Clerks
8.	Woolen-mill Operatives	Saleswomen	Laundresses (not in laundry)	Sewers and Stitchers, Manufacturing	Nurses, Registered	Waitresses
9.	Farmers and Planters	Housekeepers and Stewards	Trained Nurses	Nurses, Registered	Cashiers	Nurses, Registered
10.	Nurses	Seamstresses	Other Cooks	Telephone Operators	Private Household Cleaners and Servants	Nursing Aides, Orderlies, and Attendants

SOURCES: Baxandall, Rosalyn; Gordon, Linda; Reverby, Susan, eds. America's Working Women. New York: Vintage Books, 1976.

1980 Census of Population, Detailed Population Characteristics, United States.

The Arizona Labor Force in May

Unemployment dropped only one-tenth of a percent in May, holding near to the 6.5 percent level sustained for the four previous consecutive months. Maricopa County's rate fell by a like amount, while Pima County fell three-tenths of a percent. In the rural counties, unemployment rates fell in all but Pinal, Santa Cruz, and Yuma counties.

Thirty-five hundred more jobs paying wages and salaries were added in May. Counter to the trend that has been prevailing for months, the rural counties enjoyed a disproportionately large share of the gain. Although the rural counties have only 16 percent of the state's wage and salary employment, they won 28 percent of the net gain in May, or 1,025 jobs. Of course, much of the gain is seasonal; and the northern counties of La Paz, Mohave, Yavapai, Coconino, Navajo, and Apache collectively gained employment (1,600 jobs) while the southern counties of Yuma, Santa Cruz, Cochise, Graham, Greenlee, Gila, and Pinal collectively lost employment (575 jobs). Nevertheless, the rural net gain was nearly double the normal seasonal amount while the urban net gain was a little better than half the normal seasonal amount. Not only are the northern counties staffing up for a good tourist season, but lumber and wood products manufacturers are adding significant numbers.

Construction added 1,300, achieving a record level of 114,800 statewide. By the most recent comparative statistics available (March 1986), Arizona had the highest concentration of construction employment in the United States with 8.2 percent of statewide wage and salary employment.

Manufacturing enjoyed a moderate 500 gain in May. Two hundred of the gain was in construction-related stone, clay, and glass manufacturing. Defense-related aircraft and missile manufacturing also added a hundred. Over the year, the defense component gains have just about balanced nondefense machinery manufacturing losses of about 5,000 jobs--confirming that only half of high-tech is healthy.

Retail Trade also showed some ill health. Although a seasonal gain of better than 500 would be expected, a 500 loss was experienced. Restaurants and bars took the largest losses and the highly competitive food store component added to those losses.

Finance, Insurance, and Real Estate has been growing well this year. In fact, it has had the greatest rate of growth (5.5 percent) for the first five months of the year of any private sector industry. In May, the industry posted another greater than seasonal gain of 600. Regional banking, mortgage refinancing, and a booming construction industry have contributed to its growth. Five out of six of those new jobs were in Maricopa County.

There is little to be said about the Services industry in May other than it added a weak 300. Tourism-related activity took its usual seasonal flip-flop from the southern part of the state to the cooler northern counties. Of course, a very good tourist season is anticipated up north. The Grand Canyon has already seen a 7 percent increase over this time last year in the number of visitors.

Government has been gaining employment in the first five months of the year at a rate greater than the private sector industries (6.4 percent). In the first four months, the gain was nearly all in schools, but in May the gains were in federal, state, and city governments. Schools and county governments remained stable or lost employment. Government's gain of 1,100 in May was second only to the construction industry's in the number of new jobs.

In summary, May was a good month for employment growth, but only half as good as in the previous three years. A perceptible slowing of the economic situation is occurring. Despite the minor blip downward of the unemployment rate, there is no reason to believe it will continue in that direction. If employment growth continues to slow, it will be difficult to absorb continuing inmigration. In addition, next month will see the influx of student job hunters. While the unemployment rate may not rise, it at least is unlikely to fall.

Ron Simon

Arizona Labor Force and Employment

May 1986 (in thousands)

	ARIZONA				
				-- Amt Change --	
	May.* 1986	Apr. 1986	May. 1985	Apr. to May.	1985 to 1986
TOTAL CIVILIAN LABOR FORCE**	1577.8	1571.7	1470.4	+6.1	+107.4
Total Unemployment	99.9	98.9	97.0	+1.0	+2.9
Rate	6.3	6.3	6.6	---	---
Rate (Sea. Adj.)***	6.4	6.5	6.7	---	---
Total Employment	1477.9	1472.8	1373.4	+5.1	+104.5

The Above Labor Force Statistics Should No

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	May.* 1986	Apr. 1986	May. 1985	Apr. to May.	1985 to 1986
TOTAL WAGE AND SALARY	1347.1	1343.6	1284.0	+3.5	+63.1
Manufacturing	182.0	181.7	180.3	+0.3	+1.7
Durable Goods	143.5	143.0	143.2	+0.5	+0.3
Stone, Clay and Glass	8.0	7.8	8.0	+0.2	+0.0
Primary and Fabricated Metals	16.2	16.1	17.6	+0.1	-1.4
Primary Metals	7.7	7.7	7.8	+0.0	-0.1
Fabricated Metals	8.5	8.4	9.8	+0.1	-1.3
Machinery	64.5	64.6	69.5	-0.1	-5.0
Other Durable Goods	54.8	54.5	48.1	+0.3	+6.7
Aircraft and Missiles	26.5	26.4	21.3	+0.1	+5.2
Lumber and Wood Products (Except Furniture)	7.5	7.4	7.3	+0.1	+0.2
All Other Durable Goods	20.8	20.7	19.5	+0.1	+1.3
Nondurable Goods	38.5	38.7	37.1	-0.2	+1.4
Food and Kindred Products	8.8	8.8	8.1	+0.0	+0.7
Apparel	4.6	4.8	4.6	-0.2	+0.0
Printing and Publishing	14.9	14.9	14.2	+0.0	+0.7
All Other Nondurable Goods	10.2	10.2	10.2	+0.0	+0.0
Mining and Quarrying	10.6	10.7	12.0	-0.1	-1.4
Copper Mining	8.1	8.2	9.4	-0.1	-1.3
Other Mining and Quarrying	2.5	2.5	2.6	+0.0	-0.1
Construction	114.8	113.5	111.9	+1.3	+2.9
Trans., Communications, and Public Utilities	64.1	64.0	62.6	+0.1	+1.5
Transportation	28.6	28.7	29.2	-0.1	-0.6
Communications and Public Utilities	35.5	35.3	33.4	+0.2	+2.1
Trade	333.5	333.6	312.9	-0.1	+20.6
Wholesale Trade	66.4	66.0	63.2	+0.4	+3.2
Retail Trade	267.1	267.6	249.7	-0.5	+17.4
General Merchandise and Apparel	40.4	40.4	39.5	+0.0	+0.9
Food Stores	40.3	40.5	37.2	-0.2	+3.1
Automotive and Service Stations	33.1	32.5	30.4	+0.6	+2.7
Eating and Drinking Places	96.6	97.4	90.2	-0.8	+6.4
Other Retail Trade	56.7	56.8	52.4	-0.1	+4.3
Finance, Insurance, and Real Estate	89.4	88.8	79.9	+0.6	+9.5
Services and Miscellaneous	320.7	320.4	299.9	+0.3	+20.8
Hotels and Other Lodging Places	32.9	32.9	30.5	+0.0	+2.4
Business Services	72.6	72.2	67.1	+0.4	+5.5
Health Services	78.0	78.0	73.9	+0.0	+4.1
Other Services	137.2	137.3	128.4	-0.1	+8.8
Government	232.0	230.9	224.5	+1.1	+7.5
Federal	41.3	41.1	40.9	+0.2	+0.4
State and Local	190.7	189.8	183.6	+0.9	+7.1
School	113.8	113.8	112.2	+0.0	+1.6

* Preliminary

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

NOTE--Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment

May 1986 (in thousands)

MARICOPA COUNTY					PIMA COUNTY				
			-- Amt Change --					-- Amt Change --	
May.* 1986	Apr. 1986	May. 1985	Apr. to May.	1985 to 1986	May.* 1986	Apr. 1986	May. 1985	Apr. to May.	1985 to 1986
979.9	976.0	907.2	+3.9	+72.7	309.7	309.5	288.6	+0.2	+21.1
49.0	48.5	46.7	+0.5	+2.3	16.0	16.6	15.1	-0.6	+0.9
5.0	5.0	5.1	---	---	5.2	5.4	5.2	---	---
5.0	5.1	5.2	---	---	5.3	5.6	5.4	---	---
930.9	927.5	860.5	+3.4	+70.4	293.7	292.9	273.5	+0.8	+20.2

Be Used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

MARICOPA COUNTY					PIMA COUNTY				
887.8	885.5	843.6	+2.3	+44.2	245.8	245.2	233.6	+0.6	+12.2
129.4	129.3	130.7	+0.1	-1.3	32.9	32.8	31.0	+0.1	+1.9
103.2	103.1	104.9	+0.1	-1.7	27.6	27.6	26.1	+0.0	+1.5
4.9	4.8	4.9	+0.1	+0.0					
10.5	10.5	11.6	+0.0	-1.1					
50.8	50.8	55.5	+0.0	-4.7					
37.0	37.0	32.9	+0.0	+4.1					
26.2	26.2	25.8	+0.0	+0.4	5.3	5.2	4.9	+0.1	+0.4
5.6	5.6	5.5	+0.0	+0.1					
2.9	2.9	2.9	+0.0	+0.0					
10.8	10.8	10.3	+0.0	+0.5					
6.9	6.9	7.1	+0.0	-0.2					
0.6	0.6	0.6	+0.0	+0.0	1.6	1.6	2.4	+0.0	-0.8
80.4	79.3	78.5	+1.1	+1.9	22.0	21.9	21.2	+0.1	+0.8
42.0	41.9	40.8	+0.1	+1.2	9.3	9.3	9.5	+0.0	-0.2
19.5	19.5	19.7	+0.0	-0.2	4.5	4.5	4.5	+0.0	+0.0
22.5	22.4	21.1	+0.1	+1.4	4.8	4.8	5.0	+0.0	-0.2
229.1	229.5	213.7	-0.4	+15.4	55.3	55.0	51.9	+0.3	+3.4
53.4	52.8	50.6	+0.6	+2.8	7.6	7.6	7.3	+0.0	+0.3
175.7	176.7	163.1	-1.0	+12.6	47.7	47.4	44.6	+0.3	+3.1
26.0	26.1	25.3	-0.1	+0.7	7.1	7.1	7.3	+0.0	-0.2
25.6	25.9	23.8	-0.3	+1.8	7.1	7.0	6.1	+0.1	+1.0
21.3	20.9	19.3	+0.4	+2.0	5.7	5.6	5.1	+0.1	+0.6
63.2	64.0	58.8	-0.8	+4.4	18.1	18.2	16.6	-0.1	+1.5
39.6	39.8	35.9	-0.2	+3.7	9.7	9.5	9.5	+0.2	+0.2
70.2	69.7	62.2	+0.5	+8.0	12.9	12.7	11.6	+0.2	+1.3
218.6	218.6	203.6	+0.0	+15.0	59.6	59.7	55.2	-0.1	+4.4
18.7	18.9	17.6	-0.2	+1.1	5.7	5.8	4.8	-0.1	+0.9
59.4	59.1	55.1	+0.3	+4.3	10.5	10.4	9.3	+0.1	+1.2
52.5	52.6	49.5	-0.1	+3.0	16.1	16.1	15.5	+0.0	+0.6
88.0	88.0	81.4	+0.0	+6.6	27.3	27.4	25.6	-0.1	+1.7
117.5	116.6	113.5	+0.9	+4.0	52.2	52.2	50.8	+0.0	+1.4

-- Prepared by Labor Market Information, Research and Analysis (CPS, 1/86)

Nonmetropolitan Counties
Labor Force and Employment
May 1986

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL CIVILIAN LABOR FORCE*.	15,050	35,875	39,800	12,350	7,925	3,000	4,675
Total Unemployment	2,150	2,675	3,125	1,725	800	300	700
Rate	14.3%	7.5%	7.9%	14.0%	10.1%	10.0%	15.0%
Rate (Seas. Adj.)**. . . .	15.5%	7.6%	8.4%	14.5%	10.0%	9.4%	-INA-
Total Employment	12,900	33,200	36,675	10,625	7,125	2,700	3,975

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

TOTAL WAGE AND SALARY. . . .	14,950	24,675	35,925	9,950	4,775	2,800	2,725
Manufacturing.	750	2,100	2,850	1,325	175	0	100
Mining and Quarrying	25	125	50	1,250	0	1,675	0
Construction	950	1,250	1,725	425	150	125	125
Trans., Comm., & Pub. Util..	1,700	1,675	2,925	400	150	50	50
Trade.	1,500	5,375	8,075	1,875	1,250	275	900
Fin., Insur., & Real Estate.	275	700	775	275	125	25	100
Services and Miscellaneous .	4,475	3,725	8,775	1,850	825	75	650
Government	5,275	9,725	10,750	2,550	2,100	575	800

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL CIVILIAN LABOR FORCE*.	26,975	25,700	34,775	9,175	33,125	39,825
Total Unemployment	2,525	3,025	4,200	1,150	2,025	10,550
Rate	9.4%	11.8%	12.1%	12.5%	6.1%	26.5%
Rate (Seas. Adj.)**. . . .	9.4%	13.2%	12.2%	14.4%	6.2%	-INA-
Total Employment	24,450	22,675	30,575	8,025	31,100	29,275

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

TOTAL WAGE AND SALARY. . . .	18,600	19,575	26,250	8,175	21,975	23,525
Manufacturing.	2,400	1,850	3,125	1,175	2,350	1,650
Mining and Quarrying	275	1,125	3,400	0	575	25
Construction	1,250	1,050	1,375	350	2,025	1,600
Trans., Comm., & Pub. Util..	1,100	1,500	900	500	950	925
Trade.	5,250	3,700	4,875	3,225	5,525	7,300
Fin., Insur., & Real Estate.	925	350	725	250	925	900
Services and Miscellaneous .	3,900	5,175	2,875	1,175	4,675	4,350
Government	3,500	4,825	8,975	1,500	4,950	6,775

*Adjusted to the Current Population Survey (CPS) to reflect place of residence.
**Seasonal adjustment not applicable for economic assistance programs.

NOTE--Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs
May 1986

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,577,798	1,477,855	99,943	6.3%
Apache	15,048	12,890	2,158	14.3
Cochise	35,855	33,176	2,679	7.5
Coconino	39,777	36,659	3,118	7.8
Gila	12,332	10,616	1,716	13.9
Graham	7,916	7,122	794	10.0
Greenlee	2,936	2,639	297	9.9
La Paz	4,677	3,968	709	15.2
Maricopa	979,446	930,485	48,961	5.0
Mohave	27,561	25,034	2,527	9.2
Navajo	25,697	22,667	3,030	11.8
Pima	309,649	293,618	16,031	5.2
Pinal	34,766	30,563	4,203	12.1
Santa Cruz	9,158	8,020	1,138	12.4
Yavapai	33,108	31,082	2,026	6.1
Yuma	39,812	29,256	10,556	26.5

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators. Note: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Estimated Hours and Earnings of Production Workers in Selected Industries in Arizona
May 1986

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVG. HOURLY EARNINGS		
	MAY * 1986	APR. 1986	MAY 1985	MAY * 1986	APR. 1986	MAY 1985	MAY * 1986	APR. 1986	MAY 1985
FOR THE STATE OF ARIZONA*									
Manufacturing	400.98	401.39	386.91	41.0	41.0	40.9	9.78	9.79	9.46
Aircraft & Missiles	INA	INA	INA	INA	INA	INA	INA	INA	INA
Food & Kindred Products	376.27	380.26	359.53	40.2	40.8	42.1	9.36	9.32	8.54
Primary Metals	516.26	513.13	506.62	39.2	39.2	40.4	13.17	13.09	12.54
Machinery	360.89	363.80	338.64	39.1	39.5	39.7	9.23	9.21	8.53
Copper Mining	566.78	576.28	567.32	40.6	40.9	41.2	13.96	14.09	13.77
Construction	451.66	460.50	433.87	36.9	37.5	36.8	12.24	12.28	11.79
Utilities	595.55	612.37	572.88	42.6	43.4	43.4	13.98	14.11	13.20
Retail Trade**	237.47	243.40	233.64	33.4	33.9	33.0	7.11	7.18	7.08
Wholesale Trade	386.72	379.99	358.41	40.2	39.5	39.0	9.62	9.62	9.19

* Preliminary
** Excludes eating and drinking places.
NOTE--These estimates are based on a sample of full and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

--Prepared by Labor Market Information, Research and Analysis (1972 SIC, 1/86)

The 1986 Industry Classification Refiling

Every three years, the Arizona Department of Economic Security (DES) Research Administration staff collects information from each Arizona employer on the firm's primary business activity. This triennial update is sponsored by the U.S. Bureau of Labor Statistics (BLS) and is the basis for their Employment and Wages program, commonly called the ES-202 program, headed in Arizona by Mickey Gamez of the DES Research Administration.

There are ten major industry divisions in all, and the four due for refiling this year are the: (1) mining, (2) manufacturing, (3) construction, and (4) transportation; communications; electric, gas, and sanitary services industries. The Standard Industrial Classification (SIC) Manual is used by the ES-202 program analysts to assign each employer an SIC code based on the firm's primary business activity.

The information is collected from employers by use of the Industrial Verification Statement, which has been mailed out to the mining and manufacturing industries already and will be mailed to the other two industries later this year. The purpose of this form is to ensure that the correct SIC code and geographical area code are assigned to each employer. They are simply asked to report their principle product, group of products produced or distributed, or services rendered.

The information gathered in this ES-202 process is invaluable to state and national statisticians, economists, and others. For example, the SIC system is the base upon which the Unemployment Insurance (UI) Employer Name and Address File is built. This file serves as a sampling frame for most establishment surveys. Many BLS programs are affected directly by the SIC--mainly the ES-202 program. From this program, county-level employment and wage data are available. The data items include monthly employment, total wages, and number of reporting units.

Employment estimates of states' Current Employment Statistics (CES) programs are adjusted annually to the employment levels of the ES-202 program. These CES statistics appear each month as the four pages of "Arizona Labor Force Statistics" in this Newsletter. ES-202 data are also used to compute state insured unemployment rates for workers covered by UI programs and national averages of these rates. These can trigger federally-subsidized extended UI benefit programs. State governments also use ES-202 data in econometric models to determine projected income tax revenues.

Nationally, the Bureau of Economic Analysis in Washington, D.C. uses ES-202 data as a base for developing a large part of the wage and salary component of Personal Income (PI) and Gross National Product (GNP) statistics.

In fact, so many statistics emanate from the proper filling out of the Industrial Verification Statement, that the need for employers to respond with accurate and timely information cannot be overemphasized. Their cooperation in this effort every three years is greatly appreciated.

If employers have questions or desire further information about the ES-202 report or the Industrial Verification Statement, they may call 255-3871 in the Phoenix metropolitan area or 1-800-321-0381 from anywhere else in the state.

New Labor Market Information (LMI) Publications Now Available

The two Affirmative Action Planning Information booklets for the State of Arizona, Maricopa and Pima counties, and the large cities within; and the non metropolitan counties will be available this month. The Census Table 3, the area's occupational ethnic/sex breakdowns, will not be included in the two publications, but is available on request.

The publication, 1985 Job Bank Wage Levels gives wage rates offered by employers to job placements through the Department of Economic Security's Job Bank. This report states low, weighted average, and high wage levels for up to 600 occupations in the state, its counties, and 25 cities.

The Research Administration is glad to announce the availability of the publication, Arizona Labor Turnover: A Significant Reality. This report contains both statewide and countywide turnover data since 1982. Besides data transmission, the report deals with an analysis of the response of employment and turnover indicators to cyclical patterns in Arizona. It examines the changes in turnover indicators in major industrial categories in order to trace the development of recovery from the bottom of the recession in 1982. At the end, the report discusses the major implications of different labor turnover measures and their potential use by job training institutions, planners, reseachers, and individual firms; and for making estimates of occupational employment opportunities.

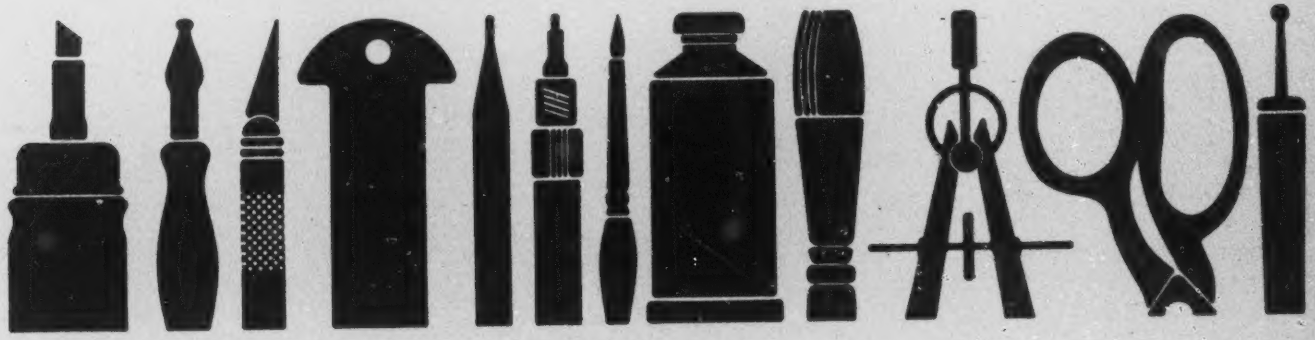
For vocational program planners and counselors, a new Occupational Information System (OIS) of Arizona report has been released entitled:

1986 OIS Cluster Summary Report By:

1. Vocational training program areas;
2. Ranked by 1986 occupational employment;
3. Ranked by 1986 job openings; and
4. Ranked by 1986 job openings minus training completers.

This is designed as a "management" type report which can be utilized in setting priorities. This report utilizes the OIS vocational training clusters. It brings together and summarizes information from the following sources: Occupational Employment Statistics (OES) program, Job Service, Unemployment Insurance (UI), Apprenticeship Services, secondary schools, community colleges, proprietary schools, and community-based organizations. (To obtain a copy, request OIS Report 86-6.) Detailed printouts for any OIS cluster can be obtained through the MICRO OIS which is discussed elsewhere in this Newsletter.

The above reports can be obtained by writing to the address on the back of this Newsletter or by calling (602) 255-3871.



Vocational Planning and the 1986 MICRO OIS of Arizona

The Occupational Information System (OIS) of Arizona has now released the 1986 version of its microcomputer data base--the MICRO OIS--for vocational planners, evaluators, and career counselors. Two new enhancements have been added. All occupations--vocational and professional--from the Occupational Employment Statistics (OES) program are now included. Also, data from the Arizona Department of Economic Security (DES) Small Employer Wage Survey and the Arizona Department of Administration (DOA) Large Employer Wage Survey are now included.

The MICRO OIS of Arizona includes training data from secondary schools, community colleges, private schools, community-based organizations, and the Job Training Partnership Act (JTPA) by vocational training area. The MICRO OIS includes data on apprenticeship completers, Job Service job applicants and job orders, Unemployment Insurance (UI) applicants, and hourly wage data from job orders. The Job Service data covers over 3,500 Dictionary of Occupational Titles (DOT) code occupations. The data to be available are summarized below.

The MICRO OIS of Arizona permits retrieval of information using a direct access mode or a search mode. The direct access mode permits retrieval of data by entry of occupational title (e.g., electronic technician) or code (e.g., a DOT code). The search mode permits retrieval of data based on employment or training levels, growth rates, wage rates, and by other variables.

A key element of this system is the clustering of occupations with related training areas. A supply and demand report may be printed out for a given cluster which pulls together occupational demand information with training supply information. This information is organized in a way that maximizes its usefulness for planning and decision-making purposes. There are currently

Information by Occupation or Vocational Training Area
Available Statewide and by County in The MICRO OIS*

Type of Information	Statewide	County
1986 Estimated employment	Yes	Yes
1991 Projected employment	Yes	Yes
1986-91 Annual replacement demand	Yes	Yes
1986-91 Annual growth demand	Yes	Yes
1986-91 Annual job openings	Yes	Yes
1984-85 Public secondary enrollments/completers	Yes	Yes
1984-85 Community college enrollments/completers	Yes	Yes
1984-85 Proprietary completers	Yes	Yes
1984-85 Community-based organization completers	Yes	Yes
1985 Job Training Partnership Act	No	No
1985 Job Service job openings	Yes	Yes
1985 Job Service openings/applicants ratio	Yes	Yes
1985 Job Service average wage	Yes	Yes
1985 Unemployment Insurance claimants	Yes	Yes
1985 Apprenticeship completers	Yes	Yes
1985 DES Small Employer Wage Survey data	Yes	Maricopa, Pima
1985 DOA Large Employer Wage Survey data	Yes	Maricopa, Pima, Balance of State

* Employment and demand data are by occupations based on the OES code. Education and training data are by vocational training area based on the Classification of Instructional Programs (CIP) code. Job Service, UI, and Apprenticeship data are by occupations based on the DOT code.

228 clusters. The MICRO OIS of Arizona is currently designed to run on an IBM microcomputer utilizing dBase III software. The software has been customized to provide a powerful and easily-used tool for vocational planning, evaluation, and counseling purposes. It is designed to be installed on user premises and is available for immediate installation at any site possessing an IBM-compatible PC with hard disk storage and a dBase III software package.

The MICRO OIS project was developed by the National Occupational Information Coordinating Committee (NOICC). Development and implementation in Arizona has been funded primarily by Vocational Education in the Arizona Department of Education. Arizona development and implementation is being carried out through the Arizona State Occupational Information Coordinating Committee (ASOICC). For further information, contact Hugo H. Soll, manager, OIS of Arizona, P.O. Box 6123, Phoenix, Arizona 85005, (602) 255-3680.

Hugo H. Soll

Arizona Unemployment Insurance Activities - April 1986

	April 1986	March 1986	April 1985	% Change From One Year Ago
Arizona Claimants Served*	30,052	30,409	25,374	+18.4%
Arizona Average Weeks Unemployed**	8.5	8.7	8.9	-4.5%
Arizona Benefits Paid*	$10,962,747	$9,979,272	$7,611,795	+44.0%
Arizona Trust Fund Balance	$345,560,866	$332,103,583	$266,088.244	+29.9%

*All Programs
**UI Only

New Developments

"New Developments" is featured each month as a service to employers and job seekers. It is a compilation of public announcements of the more significant new construction, grand openings, major hirings and layoffs, and other employer events that have special significance for Arizona labor markets. The announcements are paraphrased and otherwise edited from articles published in newspapers and other periodicals from throughout the state. "New Developments" are limited to space available, and no attempt is made to compile an exhaustive list of all such events that have occurred during the month.

EDUCATION - The 323-acre Arizona State University (ASU) Research Park, which has been under construction since 1984 on $26 million worth of land that formerly served as an experimental farm, is the first pure research park to be built in the United States since 1970, when most such activity by universities stopped for lack of funds or land. In fact, the renaissance in research parks, signified by ASU West, has attracted so much interest that the park's executive director, Reginald Owens, hosted a conference in Tempe to tell representatives of at least 250 U.S. universities and some 30 foreign campuses how it is possible to bring research parks out of the ground.

Everyone agreed with Mr. Owens that the two most famous true research parks in the U.S. are located in Palo Alto, California (Stanford) and in Raleigh, North Carolina (The Research Triangle). While ASU is not trying to compete with these two, it will also offer a true research park--no manufacturing will take place there unless it is done on a small scale for product-testing purposes only. The true research park renaissance is part of a philosophical change sweeping through the thought centers of U.S. business, education, and government. The growing thought is that if the three forces do not begin to work together effectively, the American economy is doomed to inertia.

Interest in park construction is summed up in a buzzword that accurately describes what true research parks try to accomplish: technology transfer, or the taking of technical advancements from the lab to the market. It began with work in genetic research, says Mr. Owens. "It demonstrated the idea of a noted faculty member being able to come out with a major, major product, then commercializing it while (that faculty member) stayed at the university."

TOURISM - Tourists are coming by land (13 million a year) and by air (three million a year) to visit the state of Arizona. But while the numbers keep growing, state spending to promote tourism, the second-largest industry in the state, is not keeping pace, according to Phil Keene, director of the state Office of Tourism. While tourism officials have pleaded with the legislature for more money, the increases are meager compared to those in competing states. "The average state spends twice as much as we do," Keene said. "We have a background of a lack of support." This year, the legislature has agreed to allocate $3.4 million to promote tourism. The national average is $4.3 million.

Arizona's chief competitor for the tourism dollar is California, and one-third of our state's tourism base comes from the Golden State. While magazine, television, and outdoor advertising campaigns are conducted at different seasons of the year in targeted areas such as Salt Lake City, Denver, Chicago, Minneapolis, and Texas, campaigns are under way in California year round. "We cannot out-ocean or out-water them," Keene said. "But they do not have the Grand Canyon, Lake Powell, or Monument Valley." And while the private sector spends about 10 times as much as the state to promote tourism, it is not enough to eliminate the competition. All the money spent in the state by the Valley of the Sun Convention and Visitor's Bureau, the resorts, the Tourism department, and others in the private sector, could amount to as much as $30 to $40 million a year. But, Keene noted, "There are single attractions in California, such as Disneyland, that spend more than that."

EXPANSION - Construction is currently under way on a $1.5 million expansion of Poulson Plastic's facilities at Scottsdale Air Park. The new facilities will total 53,500 square feet, which will more than triple the size of Poulson's current plant in the same area. Of the total, 9,500 square feet will be a two-story office wing, manufacturing will occupy 17,500 square feet, and 24,500 square feet will be warehouse facilities.

Poulson Plastics manufactures disposable, high-volume, critical tolerance medical and electronic components. The company expects to add 60 employees over the next two years as manufacturing demands for its products increase.

Pixley Richards West Incorporated, which now employs approximately 307 workers in Tempe, is moving its national headquarters from that city to Gilbert, where it will expand operations. The firm is planning a 120,000 square foot building for the first phase of its expansion at the Fiesta Tech Center in Gilbert. The company announced that it will initially employ at least 450 people, and that number could eventually reach 800. The company engineers and manufactures high-technology, custom injection molding for such firms as AT&T, IBM, and Motorola. It expects to be in full operation at its new facility by February or March 1987.

"We are delighted to have Pixley Richards be a part of our community," Gilbert economic development director Kevin Smith said. "The fact that it is a headquarters is a real plus. This is the first of several successes we look to have in the near future. We now have eight new industrial parks either just built or under construction."

CONSTRUCTION - Ground was broken in late May on the future site of Del E. Webb's first retirement community in Tucson--to be known as Sun City Vistoso. The project will be located on 1,000 acres about 10 miles northwest of Tucson in the hills west of Catalina State Park. The site, where 2,900 homes are planned over the next 10 years, is expected to accommodate an estimated 5,000 retired residents. Commercial, medical, and other amenities are also planned; and construction of an 18-hole golf course on 130 acres began in April.

Paul Tatz, president and chief executive of Del Webb, said the Vistoso venture is "a major step in our corporate history." He added that one-third of the project will be left as open space in an attempt to live up to the company's commitment to the desert environment.

All homes at Sun City Vistoso will be built by Webb and will range in price from just above $60,000 to $150,000, the company said. The first residents are expected to move in next March.

GRAND OPENING - After one and a half years of construction, the Motorola Government Electronics Group (GEG) has opened its aerospace operations facility in Chandler. The Chandler complex is to be used for the design, development, and production of electronic space communications equipment and systems. About 900 employees have been transferred from the group's Scottsdale facility on McDowell Road. Other phases to be added to the Chandler site will depend on Motorola's future needs, according to James Linicome, GEG general manager. A master plan calls for a maximum capacity of 6,000 employees and 1 million square feet of space on the 106-acre site. Motorola GEG employs 8,500 people in the Valley.

MINING - Sahuaro Petroleum & Asphalt Company has signed an agreement to purchase 60 acres of land, south of Coolidge, in Randolph. "The company will construct an asphalt refinery on the site with a projected capacity to produce 250,000 tons of asphalt per year," says L.S. "Bill" Brake. Brake says the refinery's completion will be coordinated with the completion of the 1,750-mile All-American pipeline, expected to be completed in 1987. It will transport heavy crude oil from California to the U.S. Gulf Coast refineries in Houston. Sahuaro will purchase and provide the refinery with the crude oil required for operation. "It is estimated that the overall Sahuaro project will take nine to 12 months to complete and cost approximately $10 million," Brake says. Once completed, he says, the refinery and auxiliary operations will create 50 to 60 new jobs.

MANUFACTURING - Meredith/Burda, the fourth largest full-service commercial printer in the United States, started up operations at its new $86 million plant in Casa Grande the second week in June. By 1988, the printing company plans to employ 350 people with an estimated annual payroll of about $10 million; making it the largest manufacturing employer in Casa Grande, a municipality of more than 16,000 residents.

Traditonally an East Coast printer serving the magazine and catalog market, Meredith/Burda is making the move to Arizona in an attempt to capture a percentage of the fast-growing printing market in the west, says A.R. Anderson, vice president and general manager of the Casa Grande plant. "If the market continues to expand in the west, then there is certainly the potential of adding more to our bindery and adding another press (in Casa Grande)." Anderson added, "In five years, we may grow to 500 or 800 employees."

Arizona Labor Market Newsletter
LABOR MARKET INFORMATION PUBLICATIONS
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This periodical is issued and printed by the Arizona Department of Economic Security as authorized by the Wagner-Peyser Act and is paid out of federal funds granted by the U.S. Department of Labor.

USPS
STATISTICAL REFERENCE INDEX
CONGRESSIONAL INFORMATION
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8/22/86 S0465-1A

ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. X No. 8
August 1986

Unemployment Rate

Seasonally Adjusted
June*

ARIZONA	6.9%
Maricopa Co.	5.2%
Pima Co.	5.4%
UNITED STATES	7.1%

Consumer Price Index

National-June
1967 - Base Year

Wage Earner/Clerical Worker -	323.0
% Chg. Yr. Ago	1.3
All Urban -	327.9
% Chg. Yr. Ago	1.7

Phoenix-2nd Qtr. 1986
1977 - Base Year

All Urban -	192.6
% Chg. Yr. Ago	0.9

Tucson-2nd Qtr. 1986
1st Qtr. 1983 - Base Qtr.

All Urban -	116.0
% Chg. Yr. Ago	1.0

* Preliminary

Minimum Wage Should It Be Raised?

One of the major intents of the minimum wage provision of the Fair Labor Standards Act (FLSA) of 1938 was to lift people out of poverty. This "bottom" wage was established to provide a minimal standard of living for U.S. workers. Has it done this? What, if any, effect has this legally-mandated wage had on our economy? Has it had an effect on the unemployment picture? Has this minimum wage pushed wage levels above it upward? What of its impact on the overall cost-of-living? Has it, in actuality, pushed people into poverty?

It has been five years since the minimum wage was increased. Although political pressure is coming in rising crescendos to raise it again, many economists do not want it increased. They cite that the last round of increases since 1974 has principally been inflationary, both in increasing wage levels above this fixed low wage and, in effect, moving the Consumer Price Index (CPI) ahead.

Proponents, on the other hand, contend that, since the real minimum wage has fallen and that the wage level's proportion of Average Gross Hourly Earnings (AGHE) has declined sharply during the 1980s, it is again time for it to be raised. While it is true that the minimum wage has decreased in real buying power and its proportion of AGHE has dropped in the last five years, there are many other issues to consider.

Since its inception in 1938, the minimum wage, as a provisional low standard of liv-

DES Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

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Arizona Labor Market Information Newsletter
WINNER OF THE ICESA 1985 LMI PUBLICATION AWARD

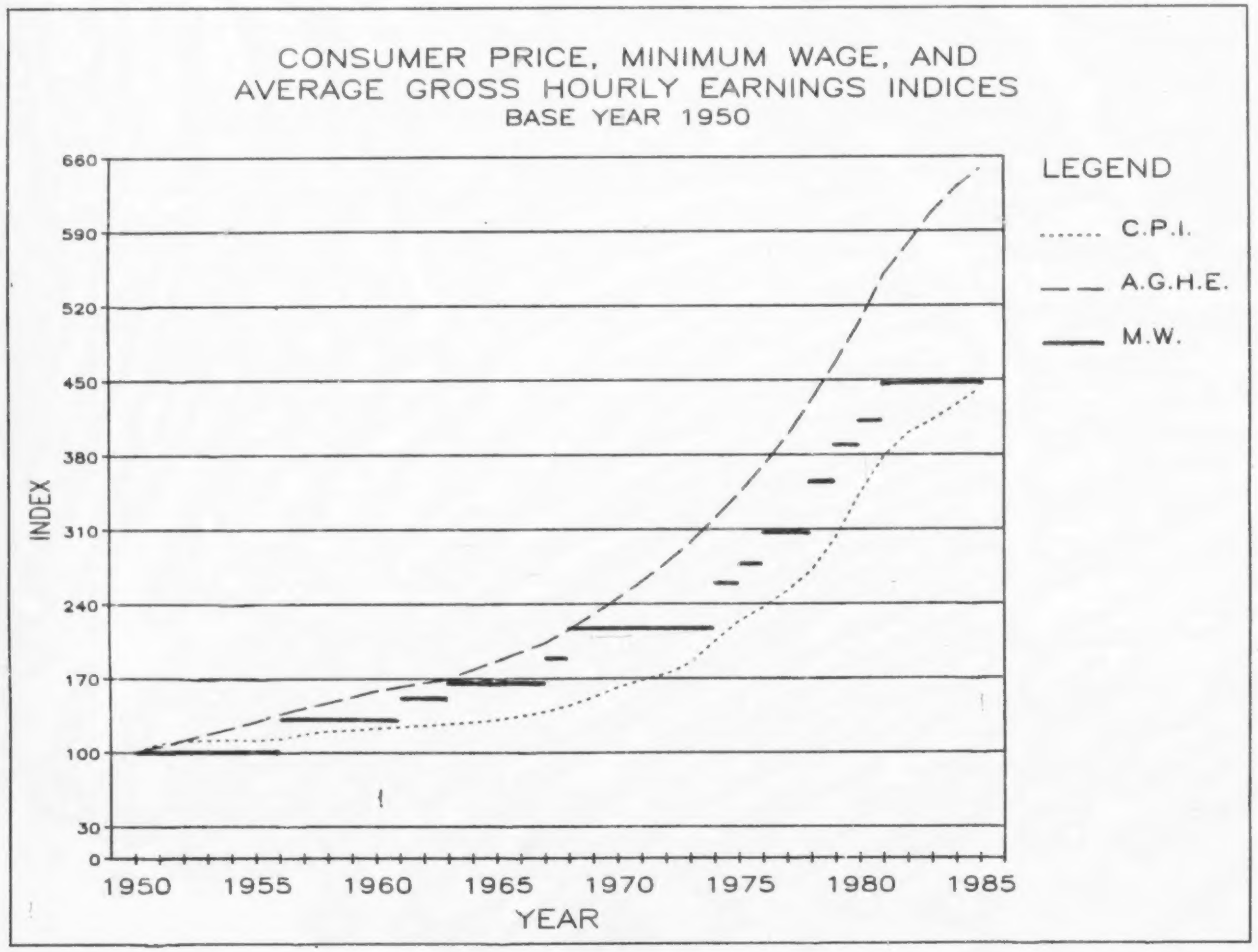
Nancy Augustin, editor
Processed by RA Clerical Support Unit

ing for wage earning workers, has remained above the cost of living as measured by the CPI. Using 1950 as the base year for both the CPI and the minimum wage index (because of the greater data availability since that year), the wage index remained, in 1985, slightly over 1 percent above the CPI. (See Graph 1.)

Actually, the minimum wage tripled from $.25 per hour in 1938 to $.75 per hour in 1950 while cost-of-living growth was low during that 12-year period. In fact, during the entire 47-year period from 1938 to 1985, the legislated minimum wage increases have been greater than the increases of the CPI by over 50 percent.

The CPI was begun in 1919 and is published monthly by the U.S. Department of Labor.

GRAPH 1



Consumer Price, Minimum Wage, and Average Gross Hourly Earnings Indices
Base Year 1950

YEAR	INDICES CPI	 M.W.	 A.G.H.E.	M.W. LEVELS PER HOUR
1950	100.0	100.0	100.0	$ .75
1955	111.2	100.0	128.8	.75
1956	112.9	133.3	136.4	1.00
1959	121.1	133.3	152.3	1.00
1960	123.0	133.3	158.3	1.00
1961	124.3	153.3	162.1	1.15
1963	127.2	166.7	169.7	1.25
1965	131.1	166.7	185.6	1.25
1967	138.6	187.7	203.0	1.40
1968	144.5	213.3	215.9	1.60
1969	152.3	213.3	230.3	1.60
1970	161.3	213.3	244.7	1.60
1971	168.2	213.3	260.6	1.60
1972	173.8	213.3	278.0	1.60
1973	184.6	213.3	297.0	1.60
1974	204.9	266.7	319.7	2.00
1975	223.6	280.0	343.2	2.10
1976	236.5	306.7	368.9	2.30
1977	251.9	306.7	397.7	2.30
1978	270.9	353.3	431.1	2.65
1979	301.9	386.7	466.7	2.90
1980	342.6	413.3	504.5	3.10
1981	377.7	446.7	549.2	3.35
1982	400.0	446.7	578.0	3.35
1983	412.5	446.7	607.6	3.35
1984	426.6	446.7	631.1	3.35
1985	441.7	446.7	648.5	3.35

It is a measure of the average change in prices over time for a fixed "market basket" of goods and services chosen to be representative of an "average" consumer's purchases necessary for a sufficient standard of living. This index helps to indicate the change in the "real" buying power of wages (money) over a set period of time. This market basket and expenditure weights were revised in 1978 from a 1972-73 Consumer Expenditure Survey. Many union contracts and governmental programs such as Social Security base their wage and income increases on this index.

Minimum wage workers in 1985 are enjoying a higher standard of living than those in 1938. Considering that most of these workers are low-skilled or inexperienced, they are fortunate in that regard. The current $3.35 per hour minimum wage, set in January 1981, pays the full-time minimum wage earner $6,968 per year. The minimum wage yearly pay in 1938 was only $520.

The minimum wage was established in 1938 to provide a minimal socially acceptable standard of living. Since the mid-1930s, the U.S. has also had government assistance for low-income people such as Aid to Families with Dependent Children, Food Stamps, and other public programs. Private programs, on the other hand, even the partially public-funded, are far more numerous than 50 years ago. They help to support many people who are in poverty or in low wage jobs, as well as labor force entrants, the unemployed, and others. These programs spend millions of dollars each year, and their ultimate goal is that those people aided can reach and sustain beneficial and productive lifestyles. A specific goal of the minimum wage law is that full-time workers can earn an income above the one-person poverty level.

Undoubtedly, at the time the FLSA was passed, it was needed. That need is still there. During the year before passage of this federal law, unemployment was high, business was poor, and the times were generally bad. People were having trouble finding work, and many people (including children) were employed at very low wages. The time was ripe for the federal government to set labor laws and regulations. Moreover, until this day, it is the only law which covers labor practices in most states, though a few states (not Arizona) do have their own minimum wage and wage collection laws.

Although the FLSA made some broad strokes in establishing minimum wage, overtime pay, record keeping, and child labor restrictions, there are many issues it does not address. For example, not included in the statute are the employment practices of: 1) vacation, holiday, severance, or sick pay; 2) meal or rest periods, holidays off or vacations; 3) premium pay for weekend or holiday work; 4) pay raises or fringe benefits; and 5) discharge notices, reasons for discharge, and immediate payments of final wages.

Also, while most businesses are covered by the FLSA, there are notable exceptions. For example, those businesses having an annual gross volume of sales or business income below a stipulated amount are exempt. As of January 1982, a retail or service establishment which has an annual gross volume of sales or business income of $362,500 or less is exempt. Any other type of enterprise having an annual gross volume of sales or business income of $250,000 or more is covered by the Act.

There are also certain categories of employees not covered by the FLSA. These include domestic service workers such as maids, housekeepers, chaffeurs, cooks, and full-time babysitters--if they receive less than $50 in cash wages in a calendar quarter or work a total of less than eight hours per week. Tipped workers may receive up to 40 percent of the minimum wage as gratuities, presently $1.34 per hour as a part of their wages. Learners and apprentices may, under certain circumstances, be paid less than the minimum wage, as well as full-time students in retail, service, or agricultural establishments, or in institutions of higher education. The Act also states that workers who are aged or mentally or physically disabled, and whose earning abilities are reduced, may also be employed at rates below the minimum wage under special certificates issued by the U.S. Department of Labor.

There are also other exemptions to the provisions of the FLSA. These include: 1) employees of certain individually-owned and operated small retail or service establishments; 2) employees of certain seasonal amusement or recreational establishments; 3) farm workers employed by anyone who used 500 or fewer man-days of farm labor in any calendar quarter of the preceding calendar year; and 4) casual babysitters and persons employed as companions to the elderly or the infirmed.

All of the previous exemptions and others can be found in the Wage and Hour Publication 1282, revised in June 1983 by the U.S. Department of Labor, Employment Standards Administration, Wage and Hour Division.

Obviously, because of all the above exceptions, many workers do not receive the benefits of the minimum wage law. In order to help those who are covered, however, this wage must affect the economy in a positive manner. Economic theory gives us good reason to believe that, quite possibly, a government-mandated wage level has the opposite effect.

Economists will agree that when an artificially imposed wage rate exceeds the "market place" wage rate (the rate openly agreed upon between the employee and employer as beneficial to both), there will be an increase in the number of unemployed. With such an imposed rate, the employer will have to assess other means or methods to productively operate his business, be he a high-tech manufacturer, a retail store manager, or a restaurant owner. If he decides to cut his staff, more people will be out of work. If he absorbs the additional labor costs, a rise in the price of his goods or services will be necessary in order for him to maintain his profit position. A reduced quality product or service could be another one of his options.

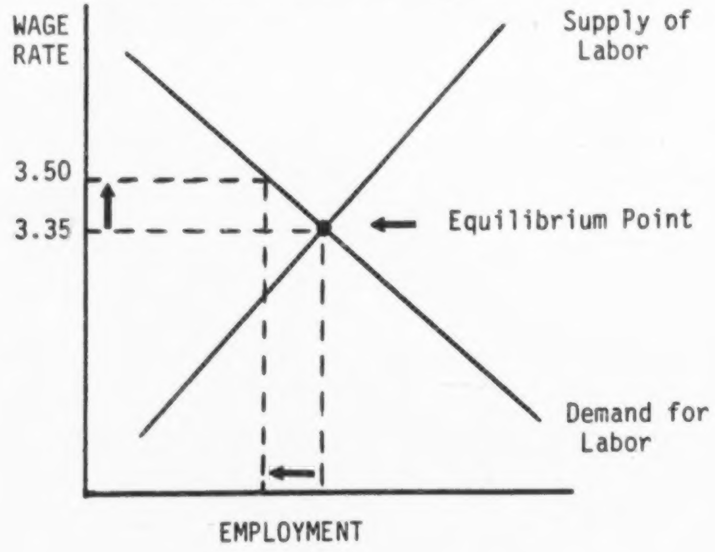
Higher priced labor might force the employer to upgrade his working staff, and/or add job duties and responsibilities to the higher skilled employees. If the employer turns to automation, there will be short-term unemployment at least, and the possibility of a long-term employment transition to a new type of work requiring retraining of the labor force.

of all ages. If the business and its workers do not adjust to this situation and it persists for a long period of time, there will eventually be people dropping out of the labor force.

Andrew Bremmer wrote, in Louis Ruckeyser's "Jobs Are Eliminated," Naught News Service, (August 1978):

> "A growing body of statistical and other evidence accumulated by economists shows that increases in the statutory minimum wage dampen the expansion of employment and lengthen the line-up of those seeking jobs. Advances in the minimum wage have a noticeable adverse impact on young people--the effects on Black teenagers being considerably more severe."

Economic Effect of A Wage Level
Above A "Market Place" Wage Level



The burden on the workers due to this disparity between legal minimum and market place wage rates would fall heavily on those workers entering the labor force--especially teenagers. Also, severely affected would be those workers who are low-skilled

From the book, Economics, Private and Public Choice, by James D. Gwartney and Richard Strump, comes this:

> "As Martin Feldstein has pointed out, the minimum wage acts as an institu-

> tional barrier limiting the opportunity to acquire on-the-job training. Many leading economists believe that minimum wage legislation is the major reason for the almost complete lack of skill-building jobs at the lower end of the wage spectrum."

What will be the possible effects of an artificially set wage rate higher than the market place wage level? If we assume that the current U.S. minimum wage of $3.35 per hour is the "market place" wage, then the supply of and demand for labor will be in equilibrium, as shown in the preceeding diagram. However, increasing the minimum wage to $3.50 per hour will result in a cost crunch to the business operator, at least in the short run (six to 12 months). The number of workers willing to work for $3.50 per hour is much greater than the employer's demand for labor at that wage level. This situation will persist until the employer can adjust with labor-saving procedures, increased efficiency, other resource savings, or--as a last recourse--a price increase in or a quality reduction of the product or service. The low-skilled employees, working at the "market place" minimum wage will be replaced with higher skilled workers attracted to those jobs by the higher minimum wage. The low-skilled workers will now be unemployed.

In their book, Economics, Private and Public Choice, James D. Gwartney and Richard Strump predict that all or some of the following outcomes of a minimum wage increase would occur:

1. Jobs in which low-skilled employees are unable to produce a marginal product that is equal to or greater than the minimum wage (unit price higher than its cost) will be eliminated.
2. Substitution of low-skilled workers by machines and highly-skilled workers whose wages have not been raised by the minimum wage increase would occur.
3. As there are more qualified workers at the higher minimum wage, some entry-level jobs will be eliminated.
4. The positions available to inexperienced workers will be primarily dead-end jobs, as it would not be cost effective for an employer to train these employees.
5. Workers who retain their jobs will earn higher wages. This is the "push effect" on wage levels above the increased minimum wage.
6. The net effect of this substitution process will be a reduction in the demand for low-skilled labor.
7. A higher minimum wage makes the low-skilled workers unqualified, that is, unemployable at such a high wage rate.
8. Outside labor competition for low-wage jobs would increase as higher-skilled and low-wage foreign workers are utilized.
9. Consumers will rely heavily on substitute goods produced by higher-skilled labor and foreign markets.
10. Goods and services in the domestic market would have reduced quality.

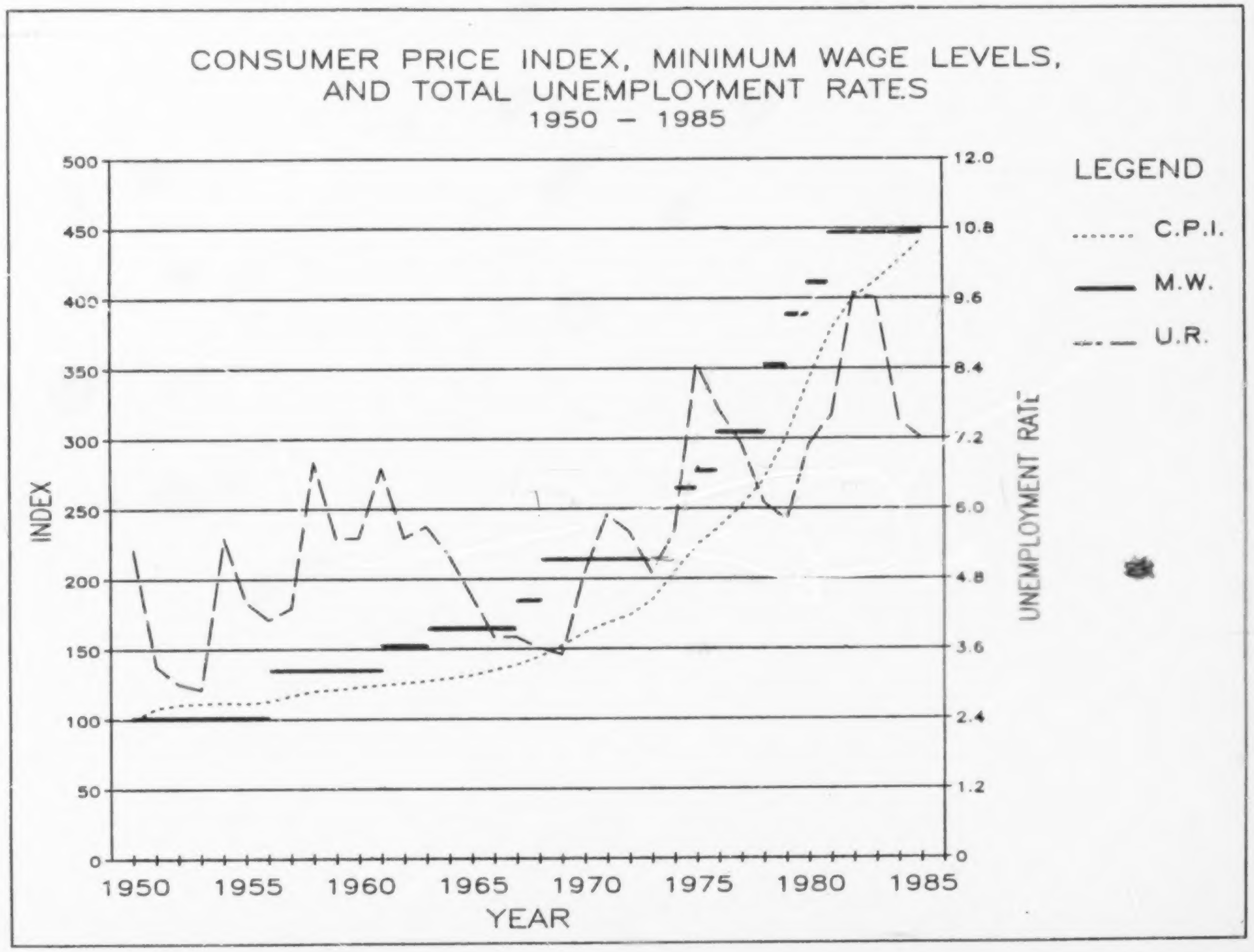
The more efficient and innovative employers will survive. The more ambitious and resourceful workers will remain on the domestic labor market scene. If nothing else, the minimum wage serves as a determinator of who will do well in our economy.

History shows that the 1950s and 1960s were "good times" economically. However, the U.S. was at war during many of those years. Unemployment rates were around 5 percent, with the exception of 1961 when it rose to 6.7 percent. The minimum wage increase lagged behind the AGHE increase for all production and nonsupervisory employees, as these two indexes rose 113.3 and 130.3 percent respectively. It appears that the U.S. economy was operating efficiently and absorbed the increased labor costs for this period, as the CPI rose only 52.3 percent. The number of persons below the poverty level showed a large decrease during those years from 39.5 million people, or 22.4 percent of the population in 1959, to 24.1 million people, or 12.1 percent of the population in 1969. The unemployment rate also inched down in the 1960s.

The decade of the 1970s began quietly enough. The overall unemployment rate in 1970 was low--4.9 percent--and the teenage rate was 15.3 percent. The Vietnam War was in its final phase. In 1970, the minimum wage stood at $1.60 per hour, a 14.3 percent increase set in 1968; and the AGHE was $3.23 per hour. The number of persons in poverty increased slightly during the year to 25.4 million people, or 12.6 percent of the population. This number would remain very similar for the entire decade. The CPI in 1970 was around 6 percent above the 1969 level, maintaining the high yearly increase it began in 1968. But economic difficulties were ahead which were to change our lifestyles and thinking throughout the coming years.

The auto industry was losing its "untouchable" status in the American economy during the 1970s. This high wage industry was being encroached upon primarily by Japan with its low wage base (presently about one-quarter of the U.S. auto industry hourly production wage level), as well as by other countries. Then came late 1973 with the oil shakeout--OPEC creating a stronghold with its crude oil reserves against our country which had become more dependent on outside sources of energy. In the coming years, OPEC was to increase its price for crude oil from around $6 per barrel in 1973 to

GRAPH 2



nearly $30 per barrel in the late 1970s. During the 1970s, the U.S. was also losing much of its light manufacturing to foreign countries with their low labor costs, as well as experiencing new heights in housing costs.

It appears that minimum wage increases may have had an effect on other wage and CPI increases as well as having an effect on unemployment. As all of this economic turmoil was occurring, the minimum wage increased almost every year for eight years, more than doubling from $1.60 per hour in 1973 to $3.35 per hour in 1981--a 109.4 percent increase. The AGHE increase lagged behind the minimum wage, though it rose 81.3 percent during the eight-year period. As the minimum wage was experiencing these large increases, the unemployment rate reflected these business difficulties by increasing from 4.9 percent in 1970 to 7.6 percent in 1981--hitting new heights along the way. The teenage unemployment rate increased from 14.5 to 19.6 percent during this period.

One foremost effect of the economic disturbances of the early 1970s was unemployment rates rising to 8.5 and 7.7 percent in 1975 and 1976, due primarily to the auto and oil industries. These rates came down during the rest of the 1970s as industries adjusted, with government support, to their difficulties. The teenage unemployment rate also rose in 1975 and 1976 to 20.0 and 19.0 percent, while the minimum wage level increased 15 percent during those two years.

Poverty numbers also reflected our worsening unemployment conditions, increasing from 23.4 million people in 1974 to 31.8 million people in 1981. In addition, the CPI rose 104.6 percent during the 1974 to 1981 period, increasing an average of 13 percent per year, as high prices of crude oil, other national resources, and new housing pushed the index upward.

As AGHE rose, spurred by these badly timed large minimum wage increases, and as basic resource prices increased to high levels, the CPI leaped far ahead, showing percentage increases of 11.0 in 1974 and 9.1 in 1975. This high CPI growth drove up interest rates as lenders were forced to charge a high nominal interest rate. Investment money was expensive.

This chain of events produced hard times for the construction industry in the late 1970s and early 1980s due to high labor costs and the high cost of borrowing money to finance projects. Unemployment rates increased. New home prices rose, as did the interest cost for buyers. More expensive homes were now the main impetus for another round of high cost-of-living increases starting in 1979. The CPI recorded increases of 11.5 percent in 1979, 13.5 percent in 1980, and 10.2 percent in 1981. Both minimum wage and AGHE increases lagged behind the CPI increases in 1979, 1980, and 1981. The minimum wage rose 9.4, 6.9, and 8.1 percent in those three years, while AGHE increased 8.3, 8.1, and 8.9 percent.

From 1975 to the early 1980s, real incomes were falling because the rapid increases in the CPI were greater than those of AGHE and the minimum wage. In "normal" times, that situation is reversed, with income increasing faster than the CPI.

The U.S. economy has returned to its historical pattern, with the CPI following wage increases. However, one of the results of this previous period has been higher investment costs and the resultant lower growth of capital expenditures. This has resulted in an increasingly serious trade imbalance, with import levels rising above exports. This situation has been compounded by the wage disparity between the U.S. and other countries. This condition will probably never be totally rectified, but could be minimized in the future if we hold down our wage increases.

One example of the reversal of wage level and CPI increases are the years 1970 through 1975. During this period, AGHE increased 40.2 percent while the CPI rose 38.6 percent--making for an increase in real income. However, during this same time, the minimum wage also increased 31.3 percent, and this had an impact on increasing both the AGHE and the CPI. Simply put, movements of the three indexes tend to have a relationship to one another, particularly changes in AGHE and the minimum wage.

The present administration's attacks on the high CPI in the early 1980s centered around tax revisions and stronger monetary policy. Abetting these policies was a resurgence of domestic oil exploration in the mid-1970s and the resultant lower price of crude oil. Also, governmental aid to the auto industry and foreign trade policy have somewhat dampened car price increases while strengthening that industry's employment picture. The unions also pitched in with lower wage increase demands in the late 1970s and early 1980s.

Currently, the U.S. economy is paying for the smaller increases in the CPI and AGHE with tigher monetary control and higher unemployment rates. The economy is also now enjoying lower interest rates and increasingly larger capital expenditures. From 1981 through 1985, the U.S. has experienced yearly average CPI increases around 4.5 percent with no minimum wage increases. The unemployment rates for those years, however, have been high--7.5 to 9.7 percent. Poverty numbers have also increased from 24.5 million people or 11.4 percent of the population in 1978 to 33.7 million people or 14.4 percent of the population in 1984.

Statistically, if we consider only those years since 1950 when the minimum wage did not increase for an extended period of time, and calculate the AGHE and CPI increases during those years, it is apparent that low minimum wage increases result in low CPI and AGHE increases. The three periods were 1956 through 1960, 1968 through 1973, and 1981 through 1985. The unemployment rates for these three time periods were 5.5, 5.0, and 8.0 percent respectively. (See Graph 3.) The yearly average CPI increase for this entire 16-year period was 3.4 percent and the yearly average AGHE increase was 4.7 percent.

One of the major goals of the minimum wage provision of the FLSA was to help people out of poverty. The evidence of whether this has been its result is rather contradictory. From 1959, when the minimum wage was $1 per hour, to 1984, when it was $3.35 per hour, the number of persons with income below the poverty level decreased from 39.5 to 33.7 million (22.4 percent of the total population in 1984). Also, in the 1960s, when there was a 60 percent increase in the minimum wage, the number of people in poverty dropped from 39.9 to 24.1 million.

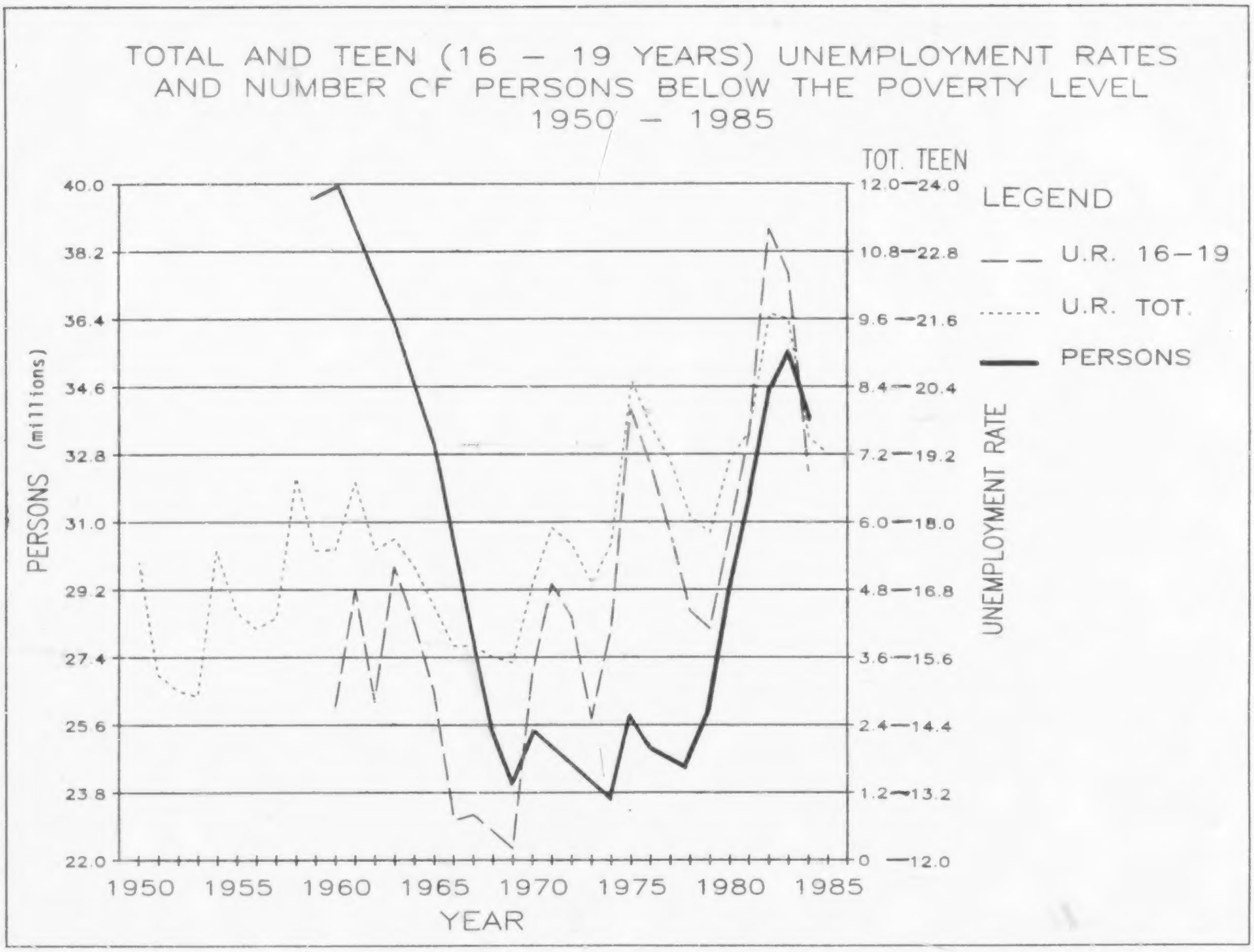
During the 1970s, on the other hand, when the minimum wage increased 80 percent, the number of people in poverty increased from 24.1 to 26.1 million. A similar phenomenon occurred in the 1980s. While the minimum wage increased 15.5 percent, the number of people in poverty rose from 26.1 to 33.7 million. In fact, the 23.5 percent increase in the minimum wage since 1955 has only lowered the number in poverty by 5.8 million people. (See Graph 4.)

CPI increases, however, are reflected in the one-person poverty level guidelines. Also, as the one-person poverty level dollar amount approaches the mininum wage (annual income), the number of people below the poverty level increases. In the late 1960s and early 1970s, when the percentages of the poverty level dollar amount to the minimum wage were in the mid to high fifties, the number of people below the poverty level was around 25 million--low numbers for this period. This percentage went up to 75.7 in 1984, with the number of people below the poverty level at 35.5 million.

Concluding Points:

1. From 1938 to 1985, minimum wage increases have outpaced CPI increases.
2. If a minimum wage increase does not increase worker productivity, it will raise the CPI through increased money demand for goods and services and increased employer costs. Such minimum wage increases will not result in real income gains.
3. Minimum wage increases will push up AGHE.

GRAPH 3



4. Minimum wage increases appear to have a one to three year worsening effect on unemployment.

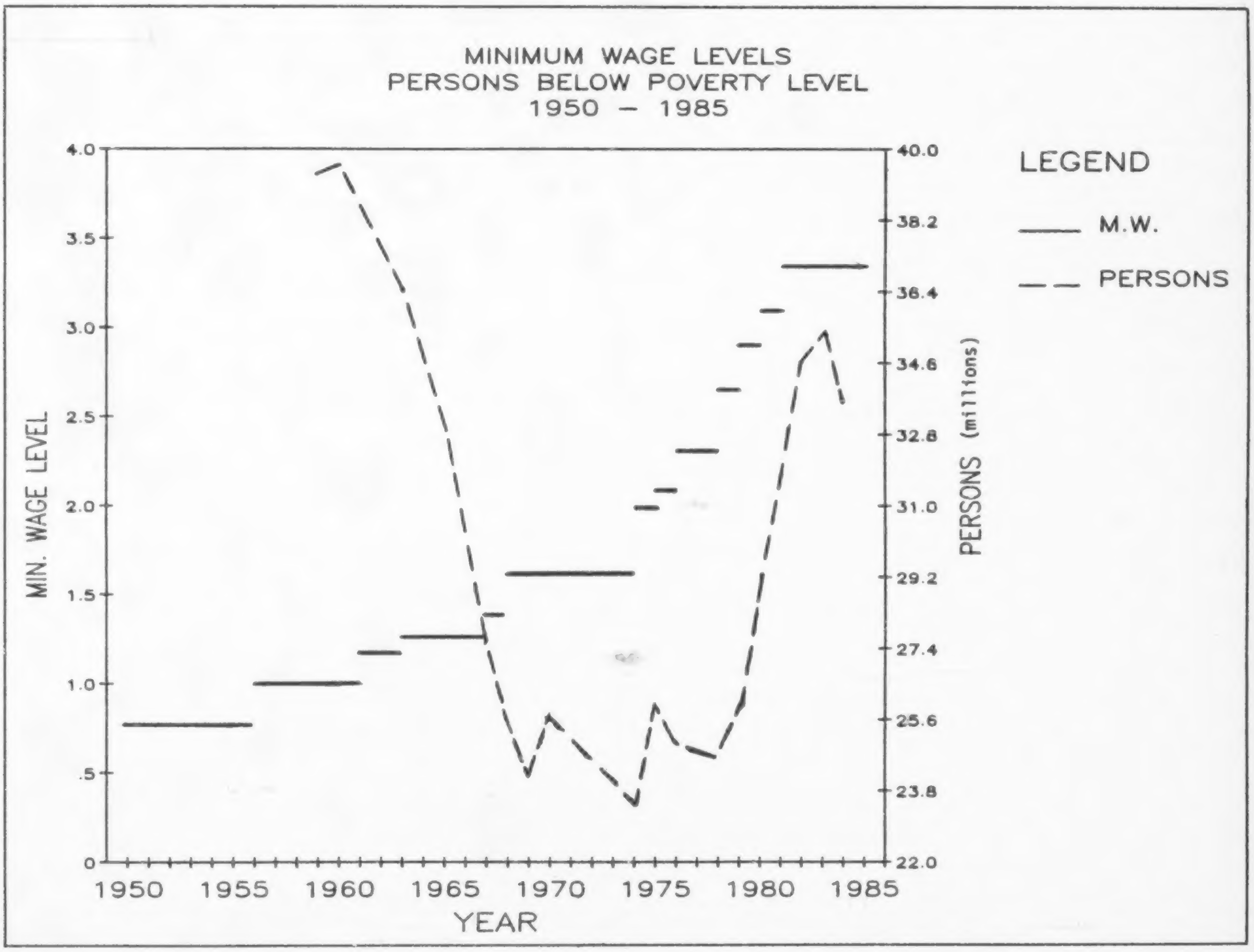
5. The number of people below the poverty level increases as unemployment increases. In addition, the number of people living in poverty increases as the one-person poverty level dollar amount becomes a larger percentage of the minimum wage earner's annual income.

6. Minimum wage jobs are found primarily in the two nongoods-producing industries--retail trade and services (including the food service sector)--two industries where about 40 percent of U.S. employment is found. The burden of the minimum wage tends to fall on teenagers and the elderly.

7. MW ↑ AGHE ↑ UR ↑ CPI ↑ PL ↑ PNo. ↑ Minimum wage (MW) increases which do not increase worker productivity will push up (AGHE), the unemployment rate (UR) in the short-run, and the (CPI). The poverty level (PL) will increase with the CPI, increasing the number of people in poverty (PNo.).

8. The minimum wage level's proportion of AGHE has dropped to 39.1 percent in 1985, down from around 50 percent in the 1960s.

GRAPH 4



MINIMUM WAGE LEVELS
PERSONS BELOW POVERTY LEVEL
1950 – 1985

9. The "Phillips Curve" concept is still at work. There is a trade-off between high unemployment and low CPI increases, and vice-versa.

10. In the past decade in the U.S., there has been a surge of automatic and computerized systems to replace low-skilled human labor.

11. It is possible that minimum wage increases which do not increase worker productivity are driving low-skilled workers out of employment and into the ranks of the poor. High teenage unemployment in the last 10 years is an example. Too high a minimum wage limits opportunities for workers to improve their employability skills.

12. There are presently many more two wage-earning families in the U.S. than there were 25 years ago.

13. Recent U.S. economic problems result largely from the high wage base of labor, large CPI increases, and steeply climbing labor costs to employers over the last 10 years.

14. In recent years, federal monetary and tax policies have been used to control increases in the CPI and, therefore, higher wage level demands. Hopefully, this places the U.S. economy in a better labor cost position with foreign countries.

Glede Kohler

Arizona Labor Force and Employment

June 1986 (in thousands)

	ARIZONA				
				-- Amt Change --	
	Jun.* 1986	May. 1986	Jun. 1985	May. to Jun.	1985 to 1986
TOTAL CIVILIAN LABOR FORCE**	1590.6	1580.3	1469.6	+10.3	+121.0
Total Unemployment	112.7	100.1	107.7	+12.6	+5.0
Rate	7.1	6.3	7.3	---	---
Rate (Sea. Adj.)***	6.9	6.4	7.1	---	---
Total Employment	1477.9	1480.2	1361.9	-2.3	+116.0

The Above Labor Force Statistics Should Not

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	Jun.* 1986	May. 1986	Jun. 1985	May. to Jun.	1985 to 1986
TOTAL WAGE AND SALARY	1332.6	1348.8	1271.0	-16.2	+61.6
Manufacturing	181.2	182.2	181.4	-1.0	-0.2
Durable Goods	142.5	143.6	144.2	-1.1	-1.7
Stone, Clay and Glass	8.1	8.0	8.1	+0.1	+0.0
Primary and Fabricated Metals	14.2	16.2	17.6	-2.0	-3.4
Primary Metals	5.7	7.7	7.8	-2.0	-2.1
Fabricated Metals	8.5	8.5	9.8	+0.0	-1.3
Machinery	64.9	64.6	69.3	+0.3	-4.4
Other Durable Goods	55.3	54.8	49.2	+0.5	+6.1
Aircraft and Missiles	26.6	26.5	22.0	+0.1	+4.6
Lumber and Wood Products (Except Furniture)	7.6	7.6	7.4	+0.0	+0.2
All Other Durable Goods	21.1	20.7	19.8	+0.4	+1.3
Nondurable Goods	38.7	38.6	37.2	+0.1	+1.5
Food and Kindred Products	9.0	8.9	8.2	+0.1	+0.8
Apparel	4.4	4.6	4.5	-0.2	-0.1
Printing and Publishing	15.0	14.9	14.3	+0.1	+0.7
All Other Nondurable Goods	10.3	10.2	10.2	+0.1	+0.1
Mining and Quarrying	10.6	10.7	12.1	-0.1	-1.5
Copper Mining	8.1	8.2	9.4	-0.1	-1.3
Other Mining and Quarrying	2.5	2.5	2.7	+0.0	-0.2
Construction	117.4	115.7	114.0	+1.7	+3.4
Trans., Communications, and Public Utilities	63.4	64.8	63.2	-1.4	+0.2
Transportation	29.5	29.3	29.3	+0.2	+0.2
Communications and Public Utilities	33.9	35.5	33.9	-1.6	+0.0
Trade	332.4	332.9	313.0	-0.5	+19.4
Wholesale Trade	66.5	66.4	63.2	+0.1	+3.3
Retail Trade	265.9	266.5	249.8	-0.6	+16.1
General Merchandise and Apparel	40.4	40.5	39.3	-0.1	+1.1
Food Stores	40.7	40.4	37.5	+0.3	+3.2
Automotive and Service Stations	33.5	33.1	30.8	+0.4	+2.7
Eating and Drinking Places	95.1	95.9	90.0	-0.8	+5.1
Other Retail Trade	56.2	56.6	52.2	-0.4	+4.0
Finance, Insurance, and Real Estate	90.3	89.4	80.7	+0.9	+9.6
Services and Miscellaneous	321.3	320.8	299.9	+0.5	+21.4
Hotels and Other Lodging Places	32.1	32.8	29.7	-0.7	+2.4
Business Services	73.5	72.7	67.8	+0.8	+5.7
Health Services	78.4	78.0	74.0	+0.4	+4.4
Other Services	137.3	137.3	128.4	+0.0	+8.9
Government	216.0	232.3	206.7	-16.3	+9.3
Federal	42.2	41.5	41.6	+0.7	+0.6
State and Local	173.8	190.8	165.1	-17.0	+8.7
School	94.2	113.8	91.7	-19.6	+2.5

* Preliminary
** Labor force, unemployment, and employment are reported by place of residence.
*** Normal seasonal variations have been eliminated to reflect underlying economic trends.
NOTE--Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment

June 1986 (in thousands)

MARICOPA COUNTY					PIMA COUNTY				
			-- Amt Change --					-- Amt Change --	
Jun.* 1986	May. 1986	Jun. 1985	May. to Jun.	1985 to 1986	Jun.* 1986	May. 1986	Jun. 1985	May. to Jun.	1985 to 1986
989.5	980.4	905.3	+9.1	+84.2	308.1	310.7	284.9	-2.6	+23.2
52.9	49.2	49.4	+3.7	+3.5	16.9	16.2	16.0	+0.7	+0.9
5.3	5.0	5.5	---	---	5.5	5.2	5.6	---	---
5.2	5.1	5.4	---	---	5.4	5.4	5.5	---	---
936.6	931.2	855.9	+5.4	+80.7	291.2	294.5	268.9	-3.3	+22.3

Be Used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

883.0	888.3	837.7	-5.3	+45.3	240.5	246.3	229.4	-5.8	+11.1
128.4	129.5	131.2	-1.1	-2.8	32.9	32.9	31.5	+0.0	+1.4
101.9	103.2	105.2	-1.3	-3.3	27.6	27.6	26.6	+0.0	+1.0
5.0	4.9	5.0	+0.1	+0.0					
8.4	10.5	11.6	-2.1	-3.2					
51.2	50.9	55.2	+0.3	-4.0					
37.3	36.9	33.4	+0.4	+3.9					
26.5	26.3	26.0	+0.2	+0.5	5.3	5.3	4.9	+0.0	+0.4
5.8	5.7	5.5	+0.1	+0.3					
2.9	2.9	3.0	+0.0	-0.1					
10.8	10.8	10.4	+0.0	+0.4					
7.0	6.9	7.1	+0.1	-0.1					
0.6	0.6	0.6	+0.0	+0.0	1.6	1.6	2.4	+0.0	-0.8
82.2	81.1	79.7	+1.1	+2.5	22.5	22.1	21.8	+0.4	+0.7
41.6	42.1	41.2	-0.5	+0.4	9.5	9.8	9.6	-0.3	-0.1
19.6	19.5	19.8	+0.1	-0.2	5.0	5.0	4.5	+0.0	+0.5
22.0	22.6	21.4	-0.6	+0.6	4.5	4.8	5.1	-0.3	-0.6
228.0	228.6	213.6	-0.6	+14.4	55.1	55.1	52.1	+0.0	+3.0
53.6	53.4	50.7	+0.2	+2.9	7.7	7.6	7.5	+0.1	+0.2
174.4	175.2	162.9	-0.8	+11.5	47.4	47.5	44.6	-0.1	+2.8
26.0	26.1	25.0	-0.1	+1.0	7.0	7.0	7.2	+0.0	-0.2
25.9	25.6	23.9	+0.3	+2.0	7.1	7.1	6.2	+0.0	+0.9
21.5	21.3	19.6	+0.2	+1.9	5.8	5.7	5.2	+0.1	+0.6
61.8	62.6	58.5	-0.8	+3.3	17.9	18.1	16.6	-0.2	+1.3
39.2	39.6	35.9	-0.4	+3.3	9.6	9.6	9.4	+0.0	+0.2
71.0	70.1	62.9	+0.9	+8.1	12.9	12.9	11.6	+0.0	+1.3
218.4	218.7	202.3	-0.3	+16.1	59.4	59.6	55.5	-0.2	+3.9
17.6	18.6	16.4	-1.0	+1.2	5.4	5.7	4.7	-0.3	+0.7
60.3	59.5	55.5	+0.8	+4.8	10.5	10.5	9.5	+0.0	+1.0
52.8	52.5	49.4	+0.3	+3.4	16.1	16.1	15.6	+0.0	+0.5
87.7	88.1	81.0	-0.4	+6.7	27.4	27.3	25.7	+0.1	+1.7
112.8	117.6	106.2	-4.8	+6.6	46.6	52.3	44.9	-5.7	+1.7

-- Prepared by Labor Market Information, Research and Analysis (CPS, 1/86)

Nonmetropolitan Counties
Labor Force and Employment
June 1986

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL CIVILIAN LABOR FORCE*.	16,000	36,050	40,475	12,400	7,750	2,925	4,725
Total Unemployment	4,100	2,825	4,850	1,775	925	300	725
Rate	25.6%	7.8%	12.0%	14.3%	11.9%	10.3%	15.3%
Rate (Seas. Adj.)**. . . .	23.7%	7.8%	11.6%	14.9%	11.6%	9.1%	-INA-
Total Employment	11,900	33,225	35,625	10,625	6,825	2,625	4,000

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL WAGE AND SALARY. . . .	14,400	24,525	34,775	9,900	4,425	2,700	2,725
Manufacturing.	725	2,125	2,850	1,300	175	0	100
Mining and Quarrying	25	125	50	1,225	0	1,675	0
Construction	1,000	1,275	1,725	450	175	125	125
Trans., Comm., & Pub. Util..	1,750	1,700	2,250	400	150	50	50
Trade.	1,550	5,375	8,150	1,975	1,250	275	925
Fin., Insur., & Real Estate.	300	700	775	275	125	25	100
Services and Miscellaneous .	4,450	3,700	9,425	1,925	825	75	650
Government	4,600	9,525	9,550	2,350	1,725	475	775

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL CIVILIAN LABOR FORCE*.	27,700	27,450	34,300	9,575	33,750	39,975
Total Unemployment	2,550	5,300	4,350	1,575	2,175	11,475
Rate	9.2%	19.3%	12.7%	16.4%	6.4%	28.7%
Rate (Seas. Adj.)**. . . .	9.4%	18.4%	12.3%	16.1%	6.6%	-INA-
Total Employment	25,150	22,150	29,950	8,000	31,575	28,500

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL WAGE AND SALARY. . . .	18,400	19,325	25,350	8,100	22,000	22,500
Manufacturing.	2,425	1,875	3,100	1,275	2,400	1,475
Mining and Quarrying	275	1,100	3,400	0	575	25
Construction	1,275	1,150	1,400	350	2,050	1,625
Trans., Comm., & Pub. Util..	1,100	1,575	900	500	975	925
Trade.	5,325	3,825	4,825	3,125	5,650	7,075
Fin., Insur., & Real Estate.	925	350	725	250	925	900
Services and Miscellaneous .	3,950	5,475	2,725	1,150	4,850	4,325
Government	3,125	3,975	8,275	1,450	4,575	6,150

*Adjusted to the Current Population Survey (CPS) to reflect place of residence.
**Seasonal adjustment not applicable for economic assistance programs.

NOTE--Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs

June 1986

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,590,636	1,477,908	112,728	7.1%
Apache	16,009	11,903	4,106	25.6
Cochise	36,040	33,227	2,813	7.8
Coconino	40,483	35,632	4,851	12.0
Gila	12,407	10,635	1,772	14.3
Graham	7,745	6,822	923	11.9
Greenlee	2,909	2,621	288	9.9
La Paz	4,736	4,009	727	15.4
Maricopa	989,504	936,586	52,918	5.3
Mohave	27,705	25,152	2,553	9.2
Navajo	27,449	22,147	5,302	19.3
Pima	308,061	291,175	16,886	5.5
Pinal	34,313	29,956	4,357	12.7
Santa Cruz	9,572	7,990	1,582	16.5
Yavapai	33,727	31,563	2,164	6.4
Yuma	39,976	28,490	11,486	28.7

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators. Note: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Estimated Hours and Earnings of Production Workers in Selected Industries in Arizona

June 1986

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVG. HOURLY EARNINGS		
	JUNE* 1986	MAY 1986	JUNE 1985	JUNE* 1986	MAY 1986	JUNE 1985	JUNE* 1986	MAY 1986	JUNE 1985
FOR THE STATE OF ARIZONA*									
Manufacturing	403.91	400.00	388.55	41.3	40.9	40.9	9.78	9.78	9.50
Aircraft & Missiles	INA	INA	INA	INA	INA	INA	INA	INA	INA
Food & Kindred Products	383.87	381.00	367.20	41.1	41.1	42.5	9.34	9.27	8.64
Primary Metals	523.23	516.26	500.22	39.4	39.2	39.7	13.28	13.17	12.60
Machinery	370.52	362.21	333.45	40.1	39.2	39.0	9.24	9.24	8.55
Copper Mining	571.54	565.96	561.02	41.0	40.6	41.1	13.94	13.94	13.65
Construction	432.70	446.40	435.34	36.3	36.5	36.8	11.92	12.23	11.83
Utilities	607.20	594.69	575.96	44.0	43.0	43.6	13.80	13.83	13.21
Retail Trade**	244.50	238.90	241.25	34.1	33.6	33.6	7.17	7.11	7.18
Wholesale Trade	388.57	386.63	361.82	40.1	39.9	39.2	9.69	9.69	9.23

* Preliminary

** Excludes eating and drinking places.

NOTE--These estimates are based on a sample of full and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

--Prepared by Labor Market Information, Research and Analysis (1972 SIC, 1/86)

The Arizona Labor Force in June

An unexpectedly large influx of job seekers in June pushed Arizona's unemployment rate up from 6.4 percent to 6.9 percent. Statewide, unemployment is at its highest level since July 1985 and is only two-tenths of a percentage point below the national average. A combination of youth entering the labor market in search of summer employment, slower job creation, and continuing inmigration all combined to push the unemployment rate up sharply. While the jump in unemployment was unexpectedly large, the months ahead will likely see further, albeit smaller, increases.

Industry employment changes were as expected in June. Seasonal losses in government were the result of schools closing for summer vacation. And in the trade and services industries, the state's central and southern counties saw employment fall as temperatures rose. On the positive side, booming summer tourism in the state's northern counties and expanding residential construction activity helped to blunt losses somewhat. But as usually happens at this time of the year, employment levels will remain depressed until September.

Interpreting employment statistics this month is complicated by a combination of seasonal factors and the strike against American Telephone and Telegraph (AT&T). Strikers, who numbered approximately 4,000, caused employment to drop in manufacturing, public utilities, retail trade, and services. The strike has now been settled and those levels will return to normal next month. Strikers are not included in the employment by industry tabulation, but they are counted as part of total employment and therefore have no impact on the unemployment rate.

In manufacturing, some encouraging signs were noted. The machinery sector, which contains many of the state's electronics firms, saw employment rise 300 to 64,900. While this leaves us 4,400 jobs below the level of a year ago, it does show some steady progress. Book-to-bill ratios are still weak, and competition from international firms will keep growth depressed. But with defense manufacturers beginning to encounter difficulties in expanding employment, the months ahead will depend on electronics for slow growth.

Meanwhile, conditions in construction and associated industries are much more encouraging. Lower interest rates have spurred activity and growth remains good. Another employment record was set in June as 1,700 more workers found jobs. The slowdown in commercial and multifamily housing has not had the dampening effect that had been expected. And looking ahead, the outlook remains bright. Vacancy rates are at reasonable levels and new residents should continue to absorb many homes. With interest rates trending downward and affordability still at desirable levels, the direction is clearly upward. Many analysts see a period well into next year of steady growth. If that is true, the next 12 months will see much activity.

A strong tourism season which had been expected in Apache, Coconino, Gila, Mohave, Navajo, and Yavapai counties gained steam in June. Activity at national parks and forests is quite good as evidenced by strong employment growth. Predictions of record activity that were made a few months ago seem to be following course. With at least two more months to go in the season, this will clearly be one of the best years in quite a long time.

Activity in June should be interpreted cautiously. Seasonal summer activity and a major strike influenced the data. The unexpectedly large jump in unemployment may be recovered somewhat over the next few months. But our outlook is little changed from earlier forecasts. Unemployment will trend upward slowly as new residents find that it takes longer to secure employment. Layoffs will be scattered among manufacturers and others, but that will be more the exception than the rule. Employment growth will be lower than in 1984 or 1985, probably about 5 percent, but still among the top performing states. With national activity anemic, our growth will be slower and concentrated in the metropolitan areas.

Dan Anderson

Arizona Unemployment Insurance Activities - May 1986

	May 1986	April 1986	May 1985	% Change From One Year Ago
Arizona Claimants Served*	30,209	30,052	27,528	9.7%
Arizona Average Weeks Unemployed**	8.8	8.5	9.0	-2.5%
Arizona Benefits Paid*	$ 10,887,908	$ 10,962,747	$ 9,353,537	16.4%
Arizona Trust Fund Balance	$370,143,626	$345,560,866	$301,169,885	+22.9%

*All Programs
**UI Only

Supported Employment
Competitive Employment for the Severely Handicapped

"Supported Employment" is a combination of paid work opportunities and ongoing support services for individuals who are severely disabled. The support services are provided to the worker within the context of a competitive work setting. The Office of Special Education and Rehabilitation Services (OSERS) in Washington, DC--recognizing that for the severely handicapped person competitive employment at or above minimum wage was unlikely to occur without intensive ongoing support--developed the Supported Employment initiative.

After the announcement of this initiative, OSERS also announced a discretionary grant program to aid states in the development and implementation of Supported Employment demonstration projects. Ten states were awarded grants extending over a five-year period to develop, implement, and monitor Supported Employment projects. Arizona is one of the ten states to receive a grant award (approximately two million dollars over the five-year period). Grants were also given to Alaska, California, Kentucky, Maryland, Michigan, Minnesota, Utah, Virginia, and Washington.

The target groups to be addressed by the project are:

- Developmentally disabled;
- Chronically mentally ill;
- Brain injured; and
- Severely physically handicapped.

An implied promise of education or training is that it will qualify an individual for employment. For the severely disabled individual, however, this has been more of a promise than a reality. The majority of these individuals become involved in publicly supported day and vocational services where they often experience low wages, slow movement toward employment, segregation from their nondisabled peers, or they simply stay at home.

In the provision of rehabilitation services to persons with disabilities, Vocational Rehabilitation (VR) has continually made an effort to serve the more severely disabled individuals in the four target populations. However, the services traditionally provided by VR are time-limited and are designed to lead to independent employment at the termination of services. While the presence of a disability often qualifies an individual for these services, entry into the program is usually restricted to those persons thought capable of making it on their own after services are completed.

The Supported Employment concept evolved out of the recognition that there has been a missing link in the transition from education and/or training into employment for the more severely disabled individual. Additionally, the cost of maintaining day treatment and day activities centers has been increasing. Supported Employment has been designed to address both of these issues. It presents both a challenge and an opportunity to create alternatives to current service systems that will provide greater employment benefits and integration into the main stream of work for the more severely disabled.

Under the concept of Supported Employment, the following criteria need to be met in order for a job to be called Supported Employment:

- It is pay for work performed;
- It is at least 20 hours per week;
- It is integrated with nondisabled persons on a regular basis;
- There are no more than eight disabled workers at a given work site; and
- The disabled worker is treated as an employee with all the rights and benefits of that status.

The emphasis will be on:

- Direct job placement through a careful client/employer match;
- Ongoing and intensive support as typically is provided in day activity programs--only this support is provided in a real work setting; and
- Follow-up and advocacy to ensure a stable work pattern that is beneficial to the employer and client alike.

A major thrust of the Supported Employment movement is the redirection of public dollars that are now being spent to maintain severely disabled persons in day treatment and other nonemployment programs. The support dollars needed to maintain individuals in their current setting will be redirected to provide the necessary ongoing support services in a competitive work placement. Persons with disabilities, taxpayers, and society as a whole want to know what outcomes are associated with the services provided and how much they cost. While the implementation of Supported Employment is still in its infancy, the data that is beginning to accumulate would suggest that over a period of time, there is a cost-benefit to maintaining a person in a work setting with ongoing supports rather than in a day treatment program. This is without consideration of either the self-esteem the severely disabled individual gains from being employed or the contributions to society the person makes through payment of taxes, social security, and other wage withholdings.

Under Arizona's grant, there are limited dollars available each year for start-up projects. For the first grant year, VR received a number of proposals from service providers statewide to develop and implement start-up projects that meet the national model of Supported Employment. The contracts for the first year start-up projects are currently being written. The training and ongoing support necessary to sustain the disabled person in Supported Employment will be performed by these service providers.

Among the several models to be used in supported employment are:

THE JOB COACH/INDIVIDUAL PLACEMENT MODEL - A trained job coach develops the job, matches the severely handicapped person to the job, and then trains the individual on the job until he or she meets industry criteria. The job coach then provides ongoing follow-up support to the individual and the employer for as long as such support is needed--intensely at first and then on a decreasing basis.

THE ENCLAVE/GROUP PLACEMENT MODEL - A group of severely handicapped workers (no more than eight), with an on-site supervisor, who perform work tasks within a host manufacturing company. The handicapped workers work on a manufacturing line alongside others doing the same work, and are managed by a specially-trained supervisor.

THE MOBILE CREW MODEL - A group of severely handicapped workers who move around from one job to another in a small, single purpose business such as a janitorial or yard maintenance business. With this model, a general manager is responsible for small crews having one supervisor and approximately five employees per crew. This is a good model for rural areas or areas where work tends to be seasonal. Prior to the implementation of this model, it is recommended that a market survey be carried out in order to determine the types of businesses most likely to be successful in a given locale.

Employers who would like more information on the Supported Employment Project or who might be able to develop work sites for severely disabled individuals can contact the project director, Lenore Drake, at 255-3332. Future plans for the project include the development of brochures and a newsletter and also an investigation into the possibility of providing additional incentives to employers for the provision of jobs for the severely disabled (in addition to the Targeted Jobs Tax Credit).

A primary objective of the project is to increase the cooperation and participation between groups and agencies in the design and implementation of a statewide system of Supported Employment. This is now occuring within Arizona through the cooperative efforts of the various funding sources. There will also be an advisory council established for the project. The council representation will come from a cross-section of the community and will include representation from the employer community.

While this concept is fairly new, people dedicated to vocational rehabilitation need a willingness to cope with yet unanswered questions that still plague the movement. By doing so, they can provide opportunities to disabled workers who might otherwise never be recognized by society as legitimate members of the workforce.

NOTE: Employers may not be aware of the services which can be provided by the Rehabilitation Services Administration (RSA) to a firm's employees who become disabled. A company has a considerable investment in a long-term employee in the knowledge the employee has of the company and of its goals and purpose. When an employee is identified as having a disability which interferes with his or her ability to perform the job, RSA can become involved (while the individual is still employed) to help organize the employer's efforts to protect that investment. Also, RSA can help the employee make a transition either into a new position with the company (by providing training), by job modification, or a restructuring of the current position (through the utilization of the services of the RSA rehabilitation engineer).

Lenore Drake

JSEC News:
Maximize the Return on Your Tax Dollar

Your Job Service Employer's Committee (JSEC) is off and running for the 1986 Fall season. The Maricopa County committees combined forces for a Metro JSEC meeting on May 29, 1986, offering a free seminar. The topic was "Positive Employee Relations and the Use of Employee Handbooks." The seminar featured a panel of three speakers who addressed the subject with a discussion following. Sixty employers attended, taking advantage of their free resources. Mesa JSEC is presenting "Initiatives for Assisting Employers." Their meeting is set for September 11, 1986 at 8:30 a.m. at the Mesa Job Services office, Seven South Hibbert, Mesa. For more information call Ms. Anne Frey, 834-7777; Ms. Terry Hickey, 831-1131; or Ms. Sally Ellison, 961-1044.

Did you know that the Arizona State Legislature has reversed an earlier decision making it again possible for a corporation to represent itself at an Unemployment Insurance hearing? Effective August 13, 1986, legal representation is no longer required.

The Legislature has also made it possible for DES to charge employers for voluntary participation in DES's Pre-layoff Assistance Program (PACT). Charges may be "only those fees necessary to cover the costs of administering the Job Service and retraining services." This is also effective August 13, 1986.

Why not join the list of employers who know how to get something for nothing? Meet your fellow employers at the next JSEC meeting held in your area. You have 16 committees to choose from. Check the following list and call the chairperson for more information. See you there.

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JSEC Communications Vice Chair

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Project Self-Sufficiency Needs Jobs

Phoenix has a new program called Project Self-Sufficiency to help single parents with young children get off welfare. Project Self-Sufficiency is a demonstration program sponsored by the U.S. Department of Housing and Urban Development. The overall goal of the program is to help very low income single parents become economically self-sufficient by fulfilling basic needs such as housing, child care, and transportation; and by providing counseling, training, and job placement services.

Over the next few months, Project Self-Sufficiency participants will be graduating from training and looking for jobs to help them reach their goal of economic independence. The Project Self-Sufficiency Task Force is looking for employers to help participants get off welfare and become self-sufficient. By hiring a participant, employers will not only be helping the individual, but will also be contributing to the health of the community by helping someone get off the welfare roll. Employers will benefit by hiring a person who is trained, motivated, and ready to work. Employers that are interested in Project Self-Sufficiency should call Arizona Women's Employment and Education (AWEE) at 258-0864.

The program is timely. Over the last decade, the number of single-parent families in Arizona increased by 97 percent. It is estimated that by the 1990's, 44 percent of the children in our state will live in single-parent households. Over 11,000 single-parent families are on the welfare rolls monthly in Maricopa County. Ninety-eight percent of these families are headed by women. The average payment per case is $215, or over $2.4 million each month. Food stamps for these families cost the public another $3.2 million monthly. Project Self-Sufficiency will stop the vicious welfare dependency cycle by offering economic stability through employment.

Mayor Terry Goddard has appointed 15 representatives from the public and private sectors to the Project Self-Sufficiency Task Force, which is implementing the program. The Task Force is responsible for obtaining the resources needed to help single-parent families become self-sufficient.

The federal government is giving Phoenix a grant of $262,000 annually to subsidize the housing costs of 46 single-parent families through the Section 8 Housing Assistance Program. The program will help families rent privately-owned apartments or houses that are decent, safe, and sanitary. The family will pay 30 percent of its income for rent and the remaining cost will be paid by the City. As the family's income increases, the amount of public assistance will decrease.

To participate in Project Self-Sufficiency, a person must be a single parent with young children and a welfare recipient. Participants must graduate from three weeks of intensive Pre-Employment Readiness Training provided by AWEE. Group motivational activities will address topics such as goal setting, problem solving, communication skills, career exploration, and job hunting strategies. All activities are geared towards achieving and retaining economic independence. Counselors will also help clients find child care, arrange transportation to work, and locate housing close to their jobs.

Project Self-Sufficiency clients will be monitored by a counselor for two years after they get a job to ensure that they receive any support services they may need to continue their employment.

Only six months since its inception, the program has its first success story. Crystal Austin, mother of four children, entered the program in April 1986. Six weeks later, she is now employed full-time with National Health Laboratories as a Medicare verification clerk.

"I knew what I wanted to do," she explains, "but I just was not going after it. I think this program is good. It helped me get out of my shell. I like my job a lot." Crystal plans to attend nursing school in the fall.

Kathleen S.K.W. Bishop
City of Phoenix

Job Alliance Planning Annual Campaign for Veterans

The Arizona Alliance of Business has announced that it will conduct a campaign to find job openings for veterans during August and September in cooperation with seven veterans organizations. Employers will be encouraged to hire veterans and pledge specific openings during a direct mail appeal this month and a week-long telephone barrage in September. More than 5,000 firms will be contacted by the Alliance, a nonprofit coalition of business, education, and labor leaders.

The group estimates that more than 6,500 veterans are actively seeking employment in metropolitan Phoenix. Job pledges received during the campaign will be entered directly into the computerized Job Bank of the Arizona Department of Economic Security. The jobs will be earmarked for veterans of any age, who should contact the nearest state Job Service office. "I hope all employers will set aside jobs for veterans in their organizations and take advantage of the skills and talents they represent," said Emmett McNulty, executive director, Alliance.

Phoenix Mayor Terry Goddard has proclaimed the week of September 7 as "Jobs for Veterans" week in honor of the campaign's telephone blitz that week. Volunteers from all of the participating veterans groups as well as the Mountain Bell Telephone Pioneers will be making calls during the five-day push.

Program co-sponsors are: U.S. Veterans Administration, U.S. Veterans Employment & Training Service, Arizona Department of Economic Security, Arizona Veterans Service Commission, The American Legion, Veterans of Foreign Wars, Disabled American Veterans, and Vietnam Veterans Leadership Program. More than 1200 job pledges were received during the 1985 campaign.

New Developments

"New Developments" is featured each month as a service to employers and job seekers. It is a compilation of public announcements of the more significant new construction, grand openings, major hirings and layoffs, and other employer events that have special significance for Arizona labor markets. The announcements are paraphrased and otherwise edited from articles published in newspapers and other periodicals from throughout the state. "New Developments" are limited to space available, and no attempt is made to compile an exhaustive list of all such events that have occurred during the month.

AGRICULTURAL JOBS - Jobs in Arizona needing agricultural skills increased by more than 21 percent in the past three years, and are predicted to increase another 43 percent by 1991, according to a University of Arizona (UA) study. The study, repeated every three years since 1970 by Dr. Phillip Zurbrick, a UA associate professor of agricultural education, said there were 47,445 agriculturally-related jobs in Arizona in September 1985. Zurbrick predicts the number to grow to 68,000 by 1991.

Horticulture was noted as the fastest growing agricultural field. Jobs in this area have increased by more than 95 percent within the past three years, Zurbrick said. He predicts that by 1991, more than 24,000 people will be employed in horticulture, making up 35 percent of all agricultural jobs in the state. Horticultural jobs include florists, golf course greenskeepers, landscape gardeners, nursery workers and others of a similar nature, Zurbrick said.

Zurbrick said that because his study includes all jobs requiring agricultural skills, his figures are higher than other sources. Other sources just count those associated with production agriculture, such as farm and ranch work, he said. "Arizona Economic Indicators," compiled by the UA College of Business and Public

Adminstration, estimated that there are only 17,700 agricultural jobs, while the Arizona State Occupational Information Coordinating Committee (ASOICC) estimated that there are 35,304.

HOME PRICES - The resale price of single-family homes in Maricopa County was stable last year, according to an analysis by Arizona State University's Center for Business Research. The average price for a resale home last year was about $51 per square foot without a garage and $54 with a garage. Homes without refrigerated air conditioning sold for an average of $45 per square foot.

CONSTRUCTION - The Papago Park Center, a development to be built on the former Legend City Amusement Park property and several adjacent parcels, was approved in mid-July by the board of directors for the Salt River Project (SRP). The plan would feature a $300 million office complex for the SRP and would be ringed by an assortment of privately-built projects.

"It is one of the most exciting development projects that I have ever seen for this community," said Mr. C. A. Howlett, an SRP assistant general manager who outlined the project to the board. The property, 478 acres of flat land with mixed zoning, is between 56th street and Project Drive from Van Buren Street to the Salt River, just west of the utility's current main office complex. The master plan calls for the SRP complex to be built in five phases, with construction on the first beginning as early as February 1987.

The first phase will include a six-story office building for the utility's computer operations. The other buildings that will be part of the complex will house corporate headquarters, the engineering and water departments, corporate services, customer services, and financial services. The tallest one will be 15 to 17 stories, another will be 12 to 14 stories, and the others will be eight to 10 stories tall. Howlett said the master plan calls for low buildings to be constructed on the south side of the site, with taller ones being located closer to the current SRP complex.

Construction has begun on the $30 million Arrowhead Country Club in Glendale, located south of Beardsley Road between 67th and 75th avenues. The 81,000 square-foot club will have two separate complexes--a 54,000 square foot Clubhouse and a 27,000 square foot Sportsclub. The country club will feature 10 tennis courts, 3 swimming pools, an exercise center, a restaurant, and an 18-hole golf course designed by Arnold Palmer. It is expected to be completed in February 1987, and will be one of the largest sports and social facilities in the Valley.

Construction is scheduled to begin in October on the first phase of the $7 million Glendale Financial Center, a 58,790 square-foot, three-story office building which will face the city's new municipal complex and town square at Glenn Drive and 58th Avenue. The building, which will be named the Arizona Bank Building, will represent the first major commercial project in Glendale's redevelopment program.

Construction has begun on a $3 million renovation of the Foothills Mall in Tucson. When finished, the project will include a cultural center for exhibitions of art, culture, natural history, and contemporary life of the Southwest.

A 153-unit student apartment complex for Grand Canyon College is on schedule, says John Zolinski, the college's physical plant and facilities planner. When completed, the $5.3 million project will provide on-campus housing for upper-classmen, married students, and older single adults. It is expected to bring more than 500 new residents to the campus at 3300 West Camelback in Phoenix.

Construction on Alta Mesa Plaza, a 120,000 square-foot shopping center at Brown and Higley roads in Mesa began in July. The center will be anchored by a 43,000 square-foot Lucky Supermarket. Approximately 32,000 square feet of shop space is planned with four freestanding building pads for restaurant and financial use. The $7.3 million plaza is expected to open for business in February 1987. The Estes Company is the developer.

Arizona Labor Market Newsletter
LABOR MARKET INFORMATION PUBLICATIONS
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This periodical is issued and printed by the Arizona Department of Economic Security as authorized by the Wagner-Peyser Act and is paid out of federal funds granted by the U.S. Department of Labor.

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ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. X No. 9
September 1986

Unemployment Rate

Seasonally Adjusted
July*

ARIZONA	7.0%
Maricopa Co.	5.4%
Pima Co.	5.6%
UNITED STATES	6.9%

Consumer Price Index

National-July
1967 - Base Year

Wage Earner/Clerical Worker - 322.9
% Chg. Yr. Ago 1.2

All Urban - 328.0
% Chg. Yr. Ago 1.6

Phoenix-2nd Qtr. 1986
1977 - Base Year

All Urban - 192.6
% Chg. Yr. Ago 0.9

Tucson-2nd Qtr. 1986
1st Qtr. 1983 - Base Qtr.

All Urban - 116.0
% Chg. Yr. Ago 1.0

* Preliminary

Forecast Update
Employment in Arizona

Last January, when we were planning our annual employment forecast, Arizona had already been blessed with three years of continued employment growth since the 1982 recession. Many analysts at that time, including Research Administration staff, foresaw a significant slowdown in growth in 1986 as national economic indicators were about to move or were moving in that direction. Since then, the global and national economies have improved or remained unchanged. We have, therefore, revised our forecasts and incorporated those changes to better evaluate Arizona's economy in the coming months. The employment forecast was modified in areas where known occurrences or very probable occurrences are expected to significantly alter the future.

Recently, the national economy has been experiencing low inflation, falling interest rates, and a weakening dollar. Inflation so far this year has averaged less than 2 percent and is expected to remain low, with only a slight increase next year. Interest rates, as expected, moved lower and are expected to remain low through the end of this year before creeping up next year. With growth and inflation expected to remain low, interest rates are expected to remain near current levels through 1988.

Arizona's economy has been one of the most dynamic in the country during the last two years. With six months of data in for 1986 there were few surprises. Construction employment continued to grow in the first half of the year. Arizona has the highest

Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

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Arizona Labor Market Information Newsletter
WINNER OF THE ICESA 1985 LMI PUBLICATION AWARD

Nancy Augustin, editor
Linda Van Calcar, word processor

concentration of construction employment in the United States with 8.2 percent of total wage and salary employment in April. This is clear evidence of a dynamic, growing economy. This growth has been fueled by low interest rates and strong population growth. Interest rates have remained at relatively low levels as the Federal Reserve has pursued an aggressive monetary policy.

The manufacturing industry has had mixed results so far. Defense contractors have expanded very rapidly, while nondefense electronics manufacturers have reduced work schedules and laid off workers. Two points deserve attention: First, the depreciation of the dollar has not yet impacted favorably in gaining a competitive edge for U.S. manufacturers. Second, growth in defense contracts has continued its upward trend, notwithstanding the expectation of the budget cuts and slower growth resulting from the Gramm-Rudman-Hollings (GRH) legislation for a balanced budget. However, the effect of GRH, or its replacement, on federally-sponsored programs is not yet fully known. As a result, employment has continued to rise, but at a slower pace than in 1984 and 1985.

Devaluation of the dollar has not yet improved the fate of U.S. electronics manufacturers because the dollar has not declined significantly against the currencies of some of our major trading partners. In other words, the dollar's depreciation reduces the cost of our exports to foreigners. But it has not been large enough to change consumer buying patterns. So, any substantial improvement in manufacturing employment appears to be several months ahead despite the decline in the value of the dollar. Beginning next year, manufacturing should realize some positive effects from the declining value of the dollar on employment.

Our forecast expects the unemployment rate to continue to hold at 6.5 percent through the end of 1986 before dropping to 6.0 percent in 1987 and to 5.8 percent in 1988. The unemployment rate, however, is projected to go up to 7.0 percent in 1989. Employment should grow, more or less, at the same pace during the rest of the year. Wage and salary employment is expected to average about 1.345 million in 1986, a 5.2 percent increase over 1985. This rate of growth is modest compared to the growth of 9.6 percent and 8.1 percent recorded in 1984 and 1985 respectively. Looking further ahead, we expect growth to be more modest but above 4.0 percent on average in both 1987 and 1988 before it drops to around 3.0 percent in 1989. These growth rates, while not spectacular, should definitely be greater than the national average.

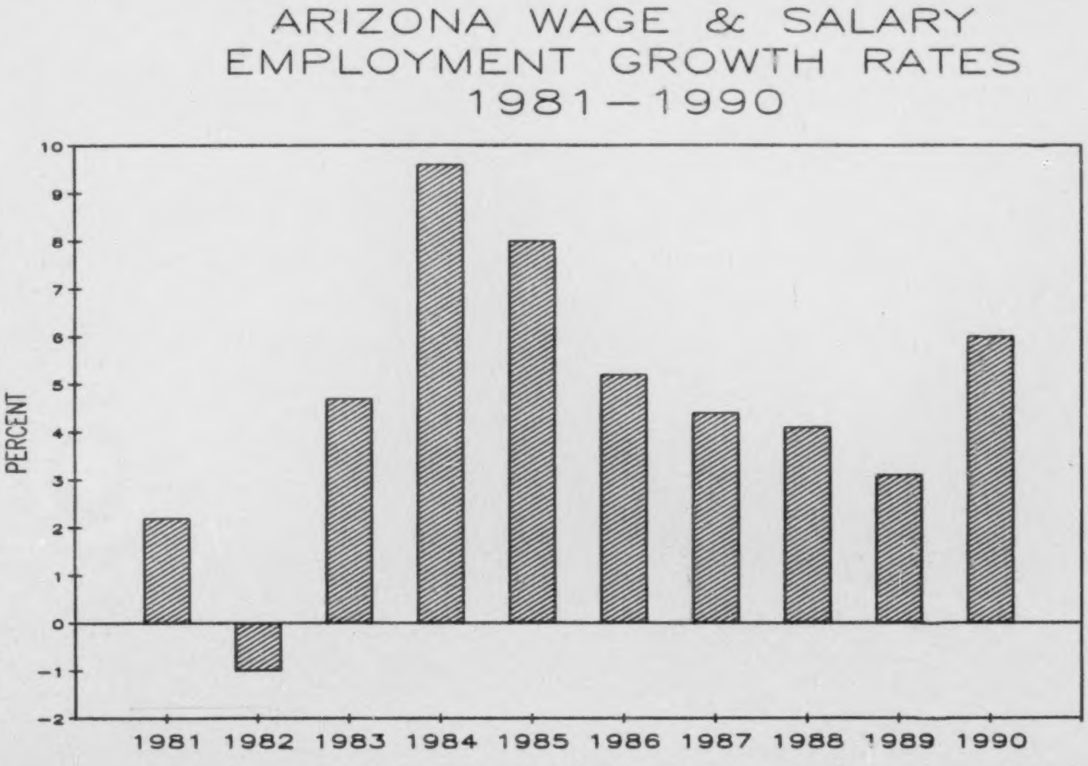
Out of the total wage and salary employment of 1.345 million, Maricopa County will account for about 888.0 thousand (66 percent), followed by Pima County with about 244.2 thousand (18.2 percent), and the nonmetropolitan counties with about 212.8 thousand (15.8 percent). During the last ten years, Maricopa County has experienced relatively faster growth than Pima County or the state's rural counties, as population, labor force, and employment have increased rapidly. (See page 16.) This pattern is expected to continue in the near future.

Most of the jobs to be created this year will be in the service and trade sectors. The largest gains should be in the business service sector (temporary help agencies, advertising firms, etc.), hotels, general merchandise firms, and eating and drinking establishments. Employment in retail trade has expanded rapidly as the regional economy has prospered. Gains projected for these two categories in 1986 are in the range of 6 to 7 percent, with modest growth in 1987 and 1988. Continued expansion of Arizona's population should ensure that the service-producing industries will create thousands of jobs every year, particularly in the metropolitan areas.

Finance, insurance, and real estate (FIRE) is expected to set a record with growth of about 12.0 percent in 1986, followed by about 4 to 5 percent in 1987 and 1988. The continued growth of this industry stems from low interest rates, consumers refinancing their existing loans and mortgages, population growth, and the expansion of out-of-state financial institutions into the state. Government and transportation, communications, and public utilities (TCPU) are all expected to have modest growth in the next 2 1/2 years. Government employment growth will be influenced by the GRH legislation for a balanced budget. Employment growth will be primarily in schools and state and local governments. Growth in federal employment will be mostly related to the military. TCPU will see growth mainly in the transportation sector, particularly in trucking companies.

The mining industry is expected to lose about 2,700 workers by 1988, continuing the losses in copper mining. The declining employment in this industry is due to intense competition from non-U.S. producers and low copper prices in the international markets. This situation is expected to continue through the near future.

Arizona's economic future continues to look good. Employment growth should be strong in 1986, followed by more modest growth in 1987 and 1988. The unemployment rate is expected to remain near 6.5 percent this year and should fall during the following two years. In the long run, we should continue to see growth rates higher than nearly all of the other states in the U.S.



SOURCE: Arizona Department of Economic Security, Research Administration, July 1986.

Arizona Economic Forecasts
(Annual Averages, in Thousands)

	1985	Growth Rate	1986	Growth Rate	1987	Growth Rate	1988	Growth Rate
Labor Force	1,477.0	2.5%	1,580.3	6.9%	1,645.9	4.1%	1,707.6	3.7%
Unemployed	96.0	35.2%	102.9	7.1%	100.1	-2.7%	100.0	-0.1%
Unemployment Rate	6.5%		6.5%		6.1%		5.9%	
Total Employment	1,381.0	0.8%	1,477.4	6.9%	1,545.8	4.6%	1,607.7	4.0%
Wage and Salary Employment	1,277.5	8.1%	1,344.8	5.2%	1,404.1	4.4%	1,461.8	4.1%
Manufacturing	180.7	4.6%	183.4	1.4%	191.1	4.2%	198.4	3.8%
Mining	12.0	-8.4%	10.7	-10.8%	9.9	-7.4%	9.3	-6.0%
Construction	110.4	13.8%	115.1	4.2%	118.2	2.6%	122.2	3.3%
TCPU	63.0	5.4%	64.6	2.5%	66.6	3.1%	68.8	3.3%
Trade	314.4	9.8%	335.5	6.7%	355.5	5.9%	373.1	4.9%
FIRE	80.6	11.8%	90.0	11.6%	94.4	4.8%	98.4	4.2%
Services	298.0	9.1%	319.6	7.2%	335.6	5.0%	350.9	4.5%
Government	218.4	5.3%	226.0	3.4%	232.8	3.0%	240.6	3.3%

NOTE: Totals may not add due to rounding. Growth rates are calculated using unrounded figures.

SOURCE: Arizona Department of Economic Security, Research Administration, July 1986.

Maricopa County

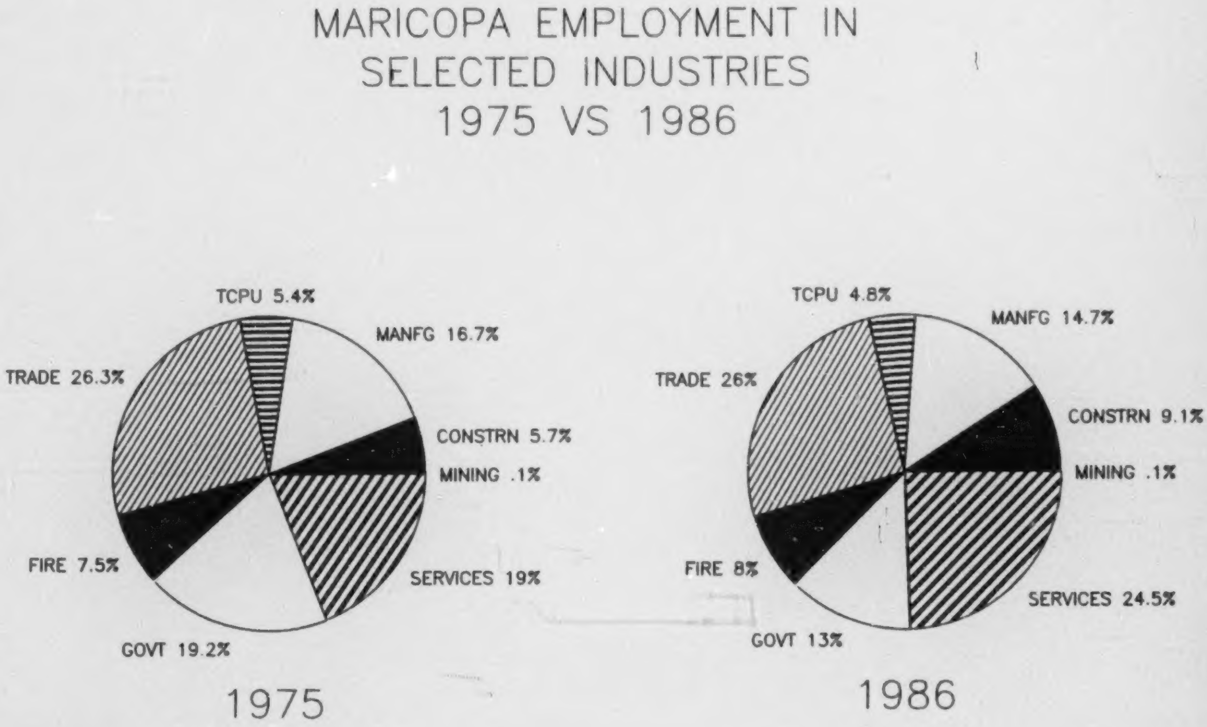
The economic forecast for Maricopa County continues to be bright. Although growth will not be at the breakneck pace of 1984 and 1985, there will be more than 125,000 additional jobs in the county by 1988. Since Maricopa County accounts for nearly two-thirds of population, employment, and income in Arizona, it has a major impact on the state's economic performance.

Unemployment over the last six months has increased only by a tenth of a percent as compared to the annual average of 5.1 percent in 1985. While the unemployment rate has not changed significantly, employment did not grow sufficiently to keep the rate from rising. In July, the unemployment rate was 5.4 percent, well below the national average of 6.9 percent. Unemployment should remain near 5.2 percent for the rest of this year before falling to 4.9 percent and 4.7 percent in 1987 and 1988 respectively.

The largest source of new jobs in the next 2 1/2 years will be the service industry. Nearly 36,000 people will be added to this industry by 1988. The rate of growth, however, will be well below that observed during the explosive 1984-1985 period. Among the services sectors, business services will grow the most, followed by health services.

The trade industry will be the second largest source of new jobs in the county. This industry will add nearly 15,000, 14,000, and 10,000 people in 1986, 1987, and 1988 respectively. Growth will come primarily from department stores, food stores, and eating and drinking places. Employment in eating and drinking places will be relatively greater than the other sectors. Relatively high growth will also take place in the automotive-related business--particularly, car dealers. This will be due to the lower interest rates that the nation is expected to continue to enjoy.

Growth in construction will be spurred by lower interest rates and strong population growth. On the one hand, the widely reported surplus of office space in the Phoenix area has resulted in lower growth in commercial construction employment; while the rapid population growth, along with lower interest rates, has sustained residential construction employment. Massive road building activities should also help to offset losses caused by lower office construction and recent layoffs at the Palo Verde Nuclear Power Plant in the Phoenix area. The number of jobs in construction is expected to rise only 4.1 percent this


MARICOPA EMPLOYMENT IN SELECTED INDUSTRIES 1975 VS 1986

SOURCE: Arizona Department of Economic Security, Research Administration, July 1986.

Maricopa County Economic Forecasts
(Annual Averages, in Thousands)

	1985	Growth Rate	1986	Growth Rate	1987	Growth Rate	1988	Growth Rate
Labor Force	912.6	2.8%	984.9	7.9%	1,031.1	4.6%	1,071.0	3.8%
Unemployed	46.5	36.0%	51.0	9.6%	50.0	-1.9%	50.4	0.8%
Unemployment Rate	5.1%		5.2%		4.8%		4.7%	
Total Employment	866.0	1.5%	933.9	7.8%	981.1	5.0%	1,020.6	4.0%
Wage and Salary Employment	839.7	8.9%	887.8	5.7%	927.1	4.4%	965.8	4.1%
Manufacturing	130.3	3.8%	130.5	0.1%	135.6	3.9%	140.2	3.3%
Mining	0.6	-14.3%	0.6	0.0%	0.6	0.0%	0.5	-16.6%
Construction	77.3	15.2%	80.4	4.0%	81.5	1.3%	84.3	3.4%
TCPU	41.0	5.9%	42.2	2.9%	43.2	2.3%	44.6	3.2%
Trade	214.8	10.6%	230.7	7.4%	245.7	6.5%	258.9	5.3%
FIRE	63.1	12.1%	70.7	12.0%	74.0	4.6%	76.9	3.9%
Services	201.8	9.0%	217.4	7.7%	227.7	4.7%	237.6	4.3%
Government	110.9	7.5%	115.3	3.9%	118.9	3.1%	122.9	3.3%

NOTE: Totals may not add due to rounding. Growth rates are calculated using unrounded figures.

SOURCE: Arizona Department of Economic Security, Research Administration, July 1986.

year, which will be greater than the 1.3 percent growth expected in 1987. Construction is expected to bounce back again in 1988 with nearly 4.0 percent growth.

The largest share of the manufacturing employment in the county is in durable goods manufacturing. High-tech manufacturing should see a recovery for their products which have been depressed by intense foreign competition and slower-than-expected growth in demand. A lower valued dollar and some real attempts to lower costs should allow these firms to add workers by the end of this year. In addition, producers of defense-related products are hiring nearly as rapidly as last year and should continue to do so unless cutbacks are forced by the Gramm-Rudman-Hollings proposal to balance the budget. As a result, manufacturing should be able to hold its current level of employment or possibly see marginal growth in 1986 followed by higher growth of more than 3.0 percent in both 1987 and 1988.

Contrary to popular belief, the nondurable sector has been holding its own with roughly 20.0 percent of manufacturing employment. Among the nondurables, printing and publishing is expected to create the largest number of new jobs.

FIRE has been the fastest growing industry during the last three years. Employment in 1986 is expected to grow by about 12.0 percent, similar to the growth recorded in 1985. Most of the growth this year is taking place in both the finance and the real estate sectors. High growth in finance has been influenced by refinancing activities due to lower interest rates. Once financial institutions complete the bulk of their refinancing activities, the industry should slow and is expected to grow about 4.6 and 3.9 percent in 1987 and 1988.

The government sector will not see growth of the magnitude recorded last year (7.0 percent) as it becomes more influenced by cuts in federal funds. However, government employment will continue to grow at about 3 to 4 percent, corresponding to future population growth. The slower growth will be seen in all sectors of government--federal, schools, state, and local. The relative effects of spending cuts, however, are not yet known.

The outlook for Maricopa County remains healthy. The industries that should provide higher employment growth are services, trade, FIRE, and construction; while the manufacturing industry will regain its vigor in 1987 and 1988. It is expected that 1986 will be another good year, although unemployment will rise very slightly because of strong population growth and relatively slower employment growth.

Pima County

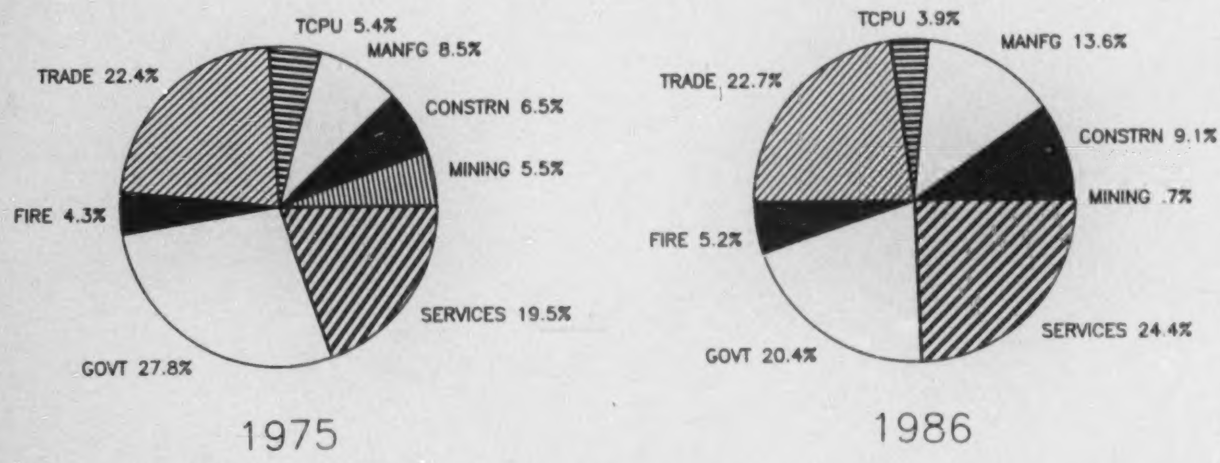
The economic outlook for Pima County looks quite impressive in the coming years as the economy diversifies its dominate sources of employment. The economic base, once dominated by copper mining, has shifted toward more manufacturing and tourist-related employment.

The process of transformation began before employment in mining declined. Copper mining employment has fallen steadily in recent years. In July, employment was 1,600 compared to 7,800 just six years ago. This trend is expected to continue in the near future due to the low price of copper in international markets and intense competition from substitute materials outside the U.S. However, the county's increasingly diverse economy should manage to mitigate the problems created by dismal conditions in the copper industry and the weakened Mexician economy. Our forecast anticipates wage and salary employment growing by about 5.1 percent in 1986, which will keep the unemployment rate at its 1985 average of 5.3 percent. The unemployment rate is expected to increase to 5.5 percent in 1987 and then to decline to 5.2 percent in 1988.

The industries that should provide the largest employment growth are services, trade, and manufacturing. The growth in services and trade will mostly come from growth in tourism. The service industry has experienced explosive growth in the Tucson area in the last two years. Two industries in particular--hotels and lodging and business services--led the way. Employment in hotels and lodging grew by nearly 16 percent in 1985, and similar or greater growth is expected in 1986. The building of new hotels and resorts is enhancing the ability of Tucson to attract a larger share of the tourist and convention businesses which historically has gone to other areas. Business services, which grew by more than 20 percent in 1984 and nearly 17 percent in 1985, is expected to grow almost 10 percent this year. Business services include activities such as building maintenance and security, temporary help agencies, and accounting and advertising firms. This industry will be an important source of employment growth in the future.

Manufacturing plays an important role in Pima County's economy. Manufacturing em-

PIMA COUNTY EMPLOYMENT
IN SELECTED INDUSTRIES
1975 VS 1986



SOURCE: Arizona Department of Economic Security, Research Administration, July 1986.

ployment in metropolitan Tucson has more than doubled in the past ten years. This growth has been due to the rapid increase in high technology manufacturers locating and expanding in the Tucson area. A large portion of manufacturing is producing defense-related equipment, thus ensuring continued expansion in 1986. Manufacturing should see steady growth of about 5.0 percent in 1987 and 1988.

The construction sector should experience modest growth of 4.7 percent in 1986 as opposed to the record growth of about 16.0 percent in 1985. Relatively low interest rates on home mortgages and strong population growth will keep home building at a high level and will absorb the temporary reduction in nonresidential construction. The industry should see a net gain of 1,000 jobs in 1986 followed by about 1,200 in 1987.

The FIRE sector should also expand by about 12.0 percent in 1986 in the Tucson area, similar to the metropolitan Phoenix area, with most of the growth in finance and real estate. These two sectors will be strong because of low interest rates, population growth, and the construction of single-family housing. The industry should grow about 6.2 percent and 5.8 percent in 1987 and 1988.

Employment in the government sector is expected to grow more moderately in Pima County than in Maricopa County. The important factors that affect government employment are the federal budget situation and population growth. Since Pima County's average population growth is less than Maricopa County's, it is expected that Pima County will, therefore, experience slower growth in government employment. The government sector should grow between 2.2 percent and 3.7 percent annually over the next three years.

Considering all these factors, the outlook for Pima County is quite good. Employment will grow between 5.1 percent and 4.3 percent over the 1986-1988 period.

Pima County Economic Forecasts
(Annual Averages, in Thousands)

	1985	Growth Rate	1986	Growth Rate	1987	Growth Rate	1988	Growth Rate
Labor Force	290.0	2.1%	306.6	5.7%	316.3	3.1%	328.9	3.9%
Unemployed	15.3	26.4%	16.3	6.5%	17.4	6.7%	17.1	-1.7%
Unemployment Rate	5.3%		5.3%		5.5%		5.2%	
Total Employment	274.7	1.0%	290.2	5.6%	298.8	2.9%	311.8	4.3%
Wage and Salary Employment	232.2	8.3%	244.2	5.1%	254.8	4.3%	265.6	4.2%
Manufacturing	31.5	9.0%	33.1	5.0%	34.7	4.8%	36.1	4.0%
Mining	2.4	-29.4%	1.6	-33.3%	1.0	-37.5%	0.8	-20.0%
Construction	21.2	15.8%	22.2	4.7%	23.4	5.4%	24.3	3.8%
TCPU	9.4	5.6%	9.5	1.0%	9.7	2.1%	10.0	3.0%
Trade	52.1	9.7%	55.4	6.3%	58.4	5.4%	60.9	4.2%
FIRE	11.5	13.9%	12.8	11.3%	13.6	6.2%	14.4	5.8%
Services	55.9	10.9%	59.6	6.6%	62.8	5.3%	66.2	5.4%
Government	48.4	3.0%	49.9	2.2%	51.1	2.4%	53.0	3.7%

NOTE: Totals may not add due to rounding. Growth rates are calculated using unrounded figures.

SOURCE: Arizona Department of Economic Security, Research Administration, July 1986.

Forecast Update Continued on Page 14

The forecast for Arizona's nonmetropolitan counties begins on page 14. After the analysis of our rural counties, the forecast ends with a chart of "Wage and Salary Employment Shares, by County, 1975 versus 1986."

Arizona Labor Force and Employment

July 1986 (in thousands)

	ARIZONA				
				-- Amt Change --	
	Jul.* 1986	Jun. 1986	Jul. 1985	Jun. to Jul.	1985 to 1986
TOTAL CIVILIAN LABOR FORCE**	1588.4	1592.1	1462.0	-3.7	+126.4
Total Unemployment	118.0	112.1	110.9	+5.9	+7.1
Rate	7.4	7.0	7.6	---	---
Rate (Sea. Adj.)***	7.0	6.9	7.2	---	---
Total Employment	1470.4	1480.0	1351.1	-9.6	+119.3

The Above Labor Force Statistics Should

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	Jul.* 1986	Jun. 1986	Jul. 1985	Jun. to Jul.	1985 to 1986
TOTAL WAGE AND SALARY	1333.2	1333.7	1261.3	-0.5	+71.9
Manufacturing	184.3	181.3	181.5	+3.0	+2.8
Durable Goods	145.1	142.4	144.2	+2.7	+0.9
Stone, Clay and Glass	8.1	8.1	8.0	+0.0	+0.1
Primary and Fabricated Metals	16.3	14.2	17.5	+2.1	-1.2
Primary Metals	7.8	5.8	7.8	+2.0	+0.0
Fabricated Metals	8.5	8.4	9.7	+0.1	-1.2
Machinery	65.1	65.0	68.7	+0.1	-3.6
Other Durable Goods	55.6	55.1	50.0	+0.5	+5.6
Aircraft and Missiles	26.8	26.5	22.6	+0.3	+4.2
Lumber and Wood Products (Except Furniture)	7.6	7.6	7.5	+0.0	+0.1
All Other Durable Goods	21.2	21.0	19.9	+0.2	+1.3
Nondurable Goods	39.2	38.9	37.3	+0.3	+1.9
Food and Kindred Products	9.0	9.0	8.6	+0.0	+0.4
Apparel	4.6	4.5	4.5	+0.1	+0.1
Printing and Publishing	15.3	15.1	14.1	+0.2	+1.2
All Other Nondurable Goods	10.3	10.3	10.1	+0.0	+0.2
Mining and Quarrying	10.6	10.7	11.8	-0.1	-1.2
Copper Mining	8.1	8.2	9.4	-0.1	-1.3
Other Mining and Quarrying	2.5	2.5	2.4	+0.0	+0.1
Construction	118.5	117.7	113.2	+0.8	+5.3
Trans., Communications, and Public Utilities	65.2	63.4	63.4	+1.8	+1.8
Transportation	29.6	29.5	29.0	+0.1	+0.6
Communications and Public Utilities	35.6	33.9	34.4	+1.7	+1.2
Trade	330.2	332.3	311.4	-2.1	+18.8
Wholesale Trade	66.1	66.4	62.9	-0.3	+3.2
Retail Trade	264.1	265.9	248.5	-1.8	+15.6
General Merchandise and Apparel	40.3	40.5	39.0	-0.2	+1.3
Food Stores	40.0	40.2	37.5	-0.2	+2.5
Automotive and Service Stations	33.8	33.6	31.1	+0.2	+2.7
Eating and Drinking Places	93.5	95.0	89.1	-1.5	+4.4
Other Retail Trade	56.5	56.6	51.8	-0.1	+4.7
Finance, Insurance, and Real Estate	91.1	90.4	81.3	+0.7	+9.8
Services and Miscellaneous	323.1	322.0	300.7	+1.1	+22.4
Hotels and Other Lodging Places	31.1	32.2	29.1	-1.1	+2.0
Business Services	75.3	73.6	68.2	+1.7	+7.1
Health Services	78.7	78.6	73.8	+0.1	+4.9
Other Services	138.0	137.6	129.6	+0.4	+8.4
Government	210.2	215.9	198.0	-5.7	+12.2
Federal	42.4	42.3	41.6	+0.1	+0.8
State and Local	167.8	173.6	156.4	-5.8	+11.4
School	84.9	93.7	80.2	-8.8	+4.7

* Preliminary
** Labor force, unemployment, and employment are reported by place of residence.
*** Normal seasonal variations have been eliminated to reflect underlying economic trends.
NOTE--Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment

July 1986 (in thousands)

MARICOPA COUNTY					PIMA COUNTY				
			-- Amt Change --					-- Amt Change --	
Jul.* 1986	Jun. 1986	Jul. 1985	Jun. to Jul.	1985 to 1986	Jul.* 1986	Jun. 1986	Jul. 1985	Jun. to Jul.	1985 to 1986
987.5	991.4	899.6	-3.9	+87.9	305.4	307.6	283.7	-2.2	+21.7
55.1	52.8	51.0	+2.3	+4.1	17.6	16.8	16.0	+0.8	+1.6
5.6	5.3	5.7	---	---	5.8	5.5	5.6	---	---
5.4	5.2	5.4	---	---	5.6	5.4	5.4	---	---
932.4	938.6	848.6	-6.2	+83.8	287.8	290.8	267.7	-3.0	+20.1

ot Be Used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

Jul.* 1986	Jun. 1986	Jul. 1985	Jun. to Jul.	1985 to 1986	Jul.* 1986	Jun. 1986	Jul. 1985	Jun. to Jul.	1985 to 1986
883.9	884.0	830.1	-0.1	+53.8	238.4	240.1	228.1	-1.7	+10.3
130.9	128.3	130.8	+2.6	+0.1	32.9	33.0	31.9	-0.1	+1.0
104.4	101.7	104.9	+2.7	-0.5	27.5	27.6	26.8	-0.1	+0.7
5.0	5.0	4.9	+0.0	+0.1					
10.5	8.3	11.6	+2.2	-1.1					
51.4	51.3	54.7	+0.1	-3.3					
37.5	37.1	33.7	+0.4	+3.8					
26.5	26.6	25.9	-0.1	+0.6	5.4	5.4	5.1	+0.0	+0.3
5.8	5.9	5.6	-0.1	+0.2					
2.9	2.9	3.0	+0.0	-0.1					
10.8	10.8	10.3	+0.0	+0.5					
7.0	7.0	7.0	+0.0	+0.0					
0.5	0.6	0.6	-0.1	-0.1	1.6	1.6	2.3	+0.0	-0.7
82.9	82.6	78.4	+0.3	+4.5	22.5	22.4	22.2	+0.1	+0.3
42.9	41.5	41.3	+1.4	+1.6	9.8	9.5	9.5	+0.3	+0.3
19.7	19.5	19.6	+0.2	+0.1	5.0	5.0	4.4	+0.0	+0.6
23.2	22.0	21.7	+1.2	+1.5	4.8	4.5	5.1	+0.3	-0.3
225.6	228.2	212.0	-2.6	+13.6	55.3	54.9	52.1	+0.4	+3.2
53.3	53.6	50.4	-0.3	+2.9	7.7	7.6	7.6	+0.1	+0.1
172.3	174.6	161.6	-2.3	+10.7	47.6	47.3	44.5	+0.3	+3.1
25.8	26.0	24.8	-0.2	+1.0	7.1	7.1	[illegible]	+0.0	-0.1
25.3	25.5	23.6	-0.2	+1.7	7.0	7.0	6.4	+0.0	+0.6
21.7	21.6	19.8	+0.1	+1.9	5.8	5.8	5.2	+0.0	+0.6
60.1	61.9	57.9	-1.8	+2.2	18.0	17.8	16.4	+0.2	+1.6
39.4	39.6	35.5	-0.2	+3.9	9.7	9.6	9.3	+0.1	+0.4
71.8	71.1	63.6	+0.7	+8.2	12.9	12.9	11.7	+0.0	+1.2
219.4	218.8	201.2	+0.6	+18.2	59.4	59.6	57.0	-0.2	+2.4
16.8	17.6	15.9	-0.8	+0.9	5.1	5.5	4.5	-0.4	+0.6
61.9	60.5	55.6	+1.4	+6.3	10.7	10.5	9.9	+0.2	+0.8
53.0	52.9	49.2	+0.1	+3.8	16.0	16.1	15.6	-0.1	+0.4
87.7	87.8	80.5	-0.1	+7.2	27.6	27.5	27.0	+0.1	+0.6
109.9	112.9	102.2	-3.0	+7.7	44.0	46.2	41.4	-2.2	+2.6

-- Prepared by Labor Market Information, Research and Analysis (CPS, 1/86)

Nonmetropolitan Counties
Labor Force and Employment
July 1986

	Apache	Cochise	Coconino	Gila	Graham	Green-lee	La Paz
TOTAL CIVILIAN LABOR FORCE*.	15,975	36,575	40,650	12,400	7,650	2,925	4,650
Total Unemployment	4,275	3,525	4,900	1,675	925	325	750
Rate	26.8%	9.6%	12.1%	13.5%	12.1%	11.1%	16.1%
Rate (Seas. Adj.)**. . . .	22.6%	9.7%	11.4%	13.9%	11.8%	10.7%	-INA-
Total Employment	11,700	33,050	35,750	10,725	6,725	2,600	3,900
THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS							
TOTAL WAGE AND SALARY. . . .	14,400	24,725	34,950	9,975	4,425	2,675	2,750
Manufacturing.	775	2,050	2,850	1,275	175	0	100
Mining and Quarrying	25	125	50	1,250	0	1,650	0
Construction	1,025	1,275	1,800	450	150	125	150
Trans., Comm., & Pub. Util..	1,775	1,700	2,400	400	150	50	75
Trade.	1,575	5,375	8,150	1,950	1,250	275	875
Fin., Insur., & Real Estate.	300	700	775	275	125	25	100
Services and Miscellaneous .	4,425	3,800	9,400	1,975	850	75	700
Government	4,500	9,700	9,525	2,400	1,725	475	750

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL CIVILIAN LABOR FORCE*.	28,000	28,150	34,600	9,725	33,600	40,625
Total Unemployment	2,600	5,500	4,450	1,825	2,175	12,350
Rate	9.3%	19.5%	12.9%	18.8%	6.5%	30.4%
Rate (Seas. Adj.)**. . . .	9.6%	17.4%	12.2%	16.8%	6.6%	-INA-
Total Employment	25,400	22,650	30,150	7,900	31,425	28,275
THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS						
TOTAL WAGE AND SALARY. . . .	18,700	19,775	25,775	8,050	21,975	22,775
Manufacturing.	2,575	2,000	3,425	1,325	2,400	1,600
Mining and Quarrying	275	1,125	3,350	0	575	50
Construction	1,300	1,250	1,425	375	2,075	1,650
Trans., Comm., & Pub. Util..	1,100	1,575	900	475	975	925
Trade.	5,375	3,875	4,775	3,050	5,700	7,075
Fin., Insur., & Real Estate.	950	350	725	250	950	925
Services and Miscellaneous .	4,075	5,700	2,775	1,150	4,950	4,375
Government	3,050	3,900	8,400	1,425	4,350	6,175

*Adjusted to the Current Population Survey (CPS) to reflect place of residence.
**Seasonal adjustment not applicable for economic assistance programs.

NOTE--Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs
July 1986

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,588,415	1,470,437	117,978	7.8%
Apache	15,978	11,696	4,282	26.8
Cochise	36,585	33,047	3,538	9.7
Coconino	40,638	35,739	4,899	12.1
Gila	12,387	10,717	1,670	13.5
Graham	7,659	6,729	930	12.1
Greenlee	2,933	2,600	333	11.4
La Paz	4,645	3,909	736	15.8
Maricopa	987,454	932,351	55,103	5.6
Mohave	28,018	25,406	2,612	9.3
Navajo	28,167	22,659	5,508	19.6
Pima	305,376	287,810	17,566	5.8
Pinal	34,596	30,141	4,455	12.9
Santa Cruz	9,734	7,911	1,823	18.7
Yavapai	33,616	31,435	2,181	6.5
Yuma	40,629	28,287	12,342	30.4

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators. Note: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Estimated Hours and Earnings of Production Workers in Selected Industries in Arizona
July 1986

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVG. HOURLY EARNINGS		
	JULY* 1986	JUNE 1986	JULY 1985	JULY* 1986	JUNE 1986	JULY 1985	JULY* 1986	JUNE 1986	JULY 1985
FOR THE STATE OF ARIZONA*									
Manufacturing	404.91	403.76	387.32	40.9	41.2	40.9	9.90	9.80	9.47
Aircraft & Missiles	INA	INA	INA	INA	INA	INA	INA	INA	INA
Food & Kindred Products	368.68	380.07	364.53	39.9	41.0	41.9	9.24	9.27	8.70
Primary Metals	519.29	523.23	490.33	39.4	39.4	38.7	13.18	13.28	12.67
Machinery	371.07	370.52	330.96	39.9	40.1	39.4	9.30	9.24	8.40
Copper Mining	555.29	570.15	573.83	40.8	40.9	40.9	13.61	13.94	14.03
Construction	431.40	435.44	425.71	36.1	36.5	36.2	11.95	11.93	11.76
Utilities	607.46	601.14	581.10	42.9	43.0	44.7	14.16	13.98	13.00
Retail Trade**	241.97	242.68	238.48	33.7	33.8	33.4	7.18	7.18	7.14
Wholesale Trade	380.56	386.63	358.41	39.6	39.9	39.0	9.61	9.69	9.19

* Preliminary

** Excludes eating and drinking places.

NOTE--These estimates are based on a sample of full and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

--Prepared by Labor Market Information, Research and Analysis (1972 SIC, 1/86)

Nonmetropolitan Counties

Total wage and salary employment for the nonmetropolitan counties in 1985 was 205,600, which is about 16.0 percent of total Arizona wage and salary employment. The nonmetropolitan counties consist of 13 rural counties with diverse economies. On average, each county has about 1.5 percent of statewide wage and salary employment. Since the employment base of each county is very small, the Research Administration continues to forecast for the nonmetropolitan areas as a whole. This helps in developing better forecasts.

The nonmetropolitan areas have some common features: 1) they rely on the four Cs--cotton, cattle, citrus, and copper; 2) they have been negatively impacted by the declining trend in commodity prices which has weakened the growth of most nonmetropolitan economies; and 3) some counties rely heavily on border trade which is adversely affected by the weakened Mexican economy.

Nonmetropolitan Counties Economic Forecasts
(Annual Averages, in Thousands)

	1985	Growth Rate	1986	Growth Rate	1987	Growth Rate	1988	Growth Rate
Labor Force	274.4	1.9%	288.8	5.2%	298.5	3.3%	307.7	3.0%
Unemployed	34.2	38.5%	35.5	3.8%	32.7	-7.8%	32.5	-0.6%
Unemployment Rate	12.5%		12.3%		11.0%		10.6%	
Total Employment	240.3	-1.8%	253.3	5.4%	265.8	4.9%	275.2	3.5%
Wage and Salary Employment	205.6	4.5%	212.8	3.5%	222.1	4.3%	230.4	3.7%
Manufacturing	18.9	2.7%	19.8	4.7%	20.7	4.5%	22.1	6.7%
Mining	9.0	-0-	8.5	-6.5%	8.3	-2.3%	8.0	-3.6%
Construction	11.9	2.6%	12.5	4.1%	13.3	6.4%	13.7	3.0%
TCPU	12.6	3.3%	12.9	2.3%	13.7	6.2%	14.2	3.6%
Trade	47.5	6.5%	49.4	3.7%	51.4	4.0%	53.4	3.8%
FIRE	6.0	5.3%	6.4	6.6%	6.9	7.8%	7.2	4.3%
Services	40.3	6.9%	42.5	5.4%	45.0	5.8%	47.1	4.6%
Government	59.1	3.1%	60.8	2.8%	62.8	3.2%	64.8	3.1%

NOTE: Totals may not add due to rounding. Growth rates are calculated using unrounded figures.

SOURCE: Arizona Department of Economic Security, Research Administration, July 1986.

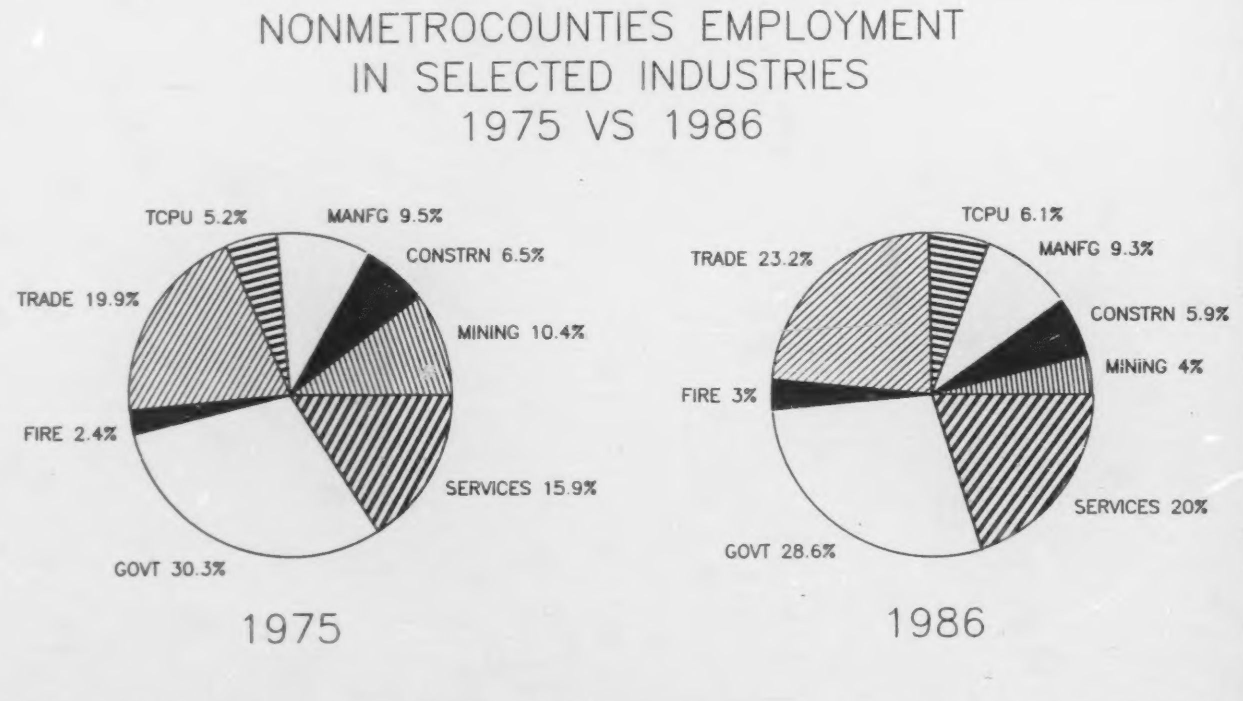
Since most commodities markets (i.e., cotton and copper markets) are expected to remain soft in the near future, the forecast projects a growth rate of about 3.5 percent in 1986, then improving to nearly 4.5 percent in 1987. On the other hand, unemployment will remain in double digits for most of the nonmetropolitan counties in the foreseeable future. During the forecast period, the unemployment rate should decline from its present level of about 12.5 percent to about 10.6 percent in 1988.

In general, unemployment has been a persistent problem in most of the rural areas. A few communities--Flagstaff, Prescott, Sierra Vista, and Casa Grande--have been able to attract enough jobs to keep their unemployment rates below the double digit levels that exist in most other rural communities. Others such as Clifton, Morenci, Douglas, and Superior have been ravaged by the depressed copper industry.

In general, employment in the nonmetropolitan counties will grow at a slower rate than in the urban counties. However, there are some cities that should experience good economic growth. These cities are characterized by strong service and trade sectors, especially related to tourism; some new manufacturing facilities; and new construction projects. On the other hand, mining communities will experience negative growth in employment. The communities that rely on border trade (e.g., Nogales, Yuma) are negatively affected by the lower value of the peso against the dollar and a weak Mexican economy in general.

The trade and service industries together will account for over half of all new jobs in the nonmetropolitan counties during the next two and a half years with services adding 6,800 and trade adding 5,900 new jobs. As mentioned above, many of these jobs will be related to tourism: i.e., hotels and lodging sectors, general merchandise sectors, and eating and drinking places.

Nonmetropolitan counties will experience better growth in nondurable than durable



SOURCE: Arizona Department of Economic Security, Research Administration, July 1986.

goods manufacturing. The nondurables include apparel, printing and publishing, textiles, paper, plastics, and leather. In the durables categories, lumber and wood products, stone, clay, and glass should experience modest employment growth. Construction should see an increase of 600 jobs in 1986 as a result of low interest rates.

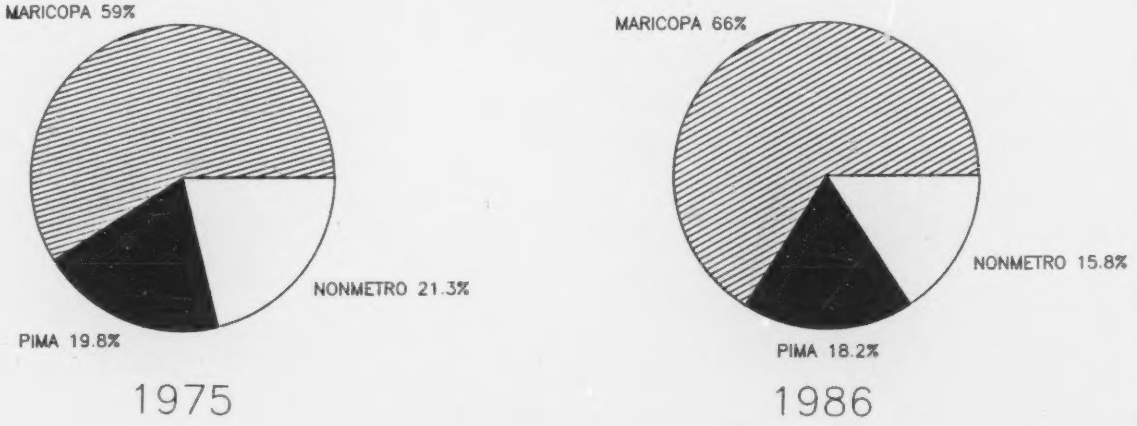
It is expected that Navajo, Coconino, and Apache counties will benefit from the growth in lumber and wood products; Mohave, Yuma, Pinal, Yavapai, and Cochise from construction and some manufacturing. Graham, Greenlee, and Gila will be hurt somewhat by employment losses in primary metals manufacturing due to problems in mining.

Finally, government, the largest employer in the nonmetropolitan counties, should add about 1,700 jobs in 1986. Employment growth should average about 3.0 percent in 1987 and 1988.

In the long run, nonmetropolitan Arizona should be better off. If farm and metal prices improve and the dollar weakens gradually, the rural counties will be able to attract a larger share of total new migrants to the state.

Jalal Ahmad

WAGE & SALARY EMPLOYMENT
SHARES, BY COUNTY
1975 VS 1986



SOURCE: Arizona Department of Economic Security, Research Administration, July 1986.

Arizona Unemployment Insurance Activities - June 1986

	June 1986	May 1986	June 1985	From One Year Ago
Arizona Claimants Served*	33,503	30,209	31,970	4.8%
Arizona Average Weeks Unemployed**	8.5	8.8	8.3	2.7%
Arizona Benefits Paid*	$ 11,035,491	$ 10,887,908	$ 8,889,619	24.1%
Arizona Trust Fund Balance	$371,365,100	$370,143,626	$295,410,671	25.7%

*All Programs **UI Only

The Arizona Labor Force in July

The continuing rise in Arizona's unemployment rate, coupled with a relatively static national rate, pushed our unemployment rate above the national average for the first time since March 1983. As has been the case for many months, the rise in unemployment was principally the result of job seekers having a more difficult time finding employment. While an upward trend in Arizona's unemployment had been expected, what is surprising is the stability of unemployment nationally. Still, the rising unemployment rate masks a strong economy. We are continuing to create jobs at a rapid rate.

With comparative data for every state now available covering the first half of 1986, a review of our economic performance with that of other states helps to clarify the current situation. By nearly every general measure of growth, Arizona remains quite healthy. For example, New Hampshire and Arizona have recorded the fastest job growth of any state in the nation over the last twelve months of just under five percent. And in terms of total employment, Arizona grew by 8.5 percent, far outdistancing Florida and New Hampshire who grew 7.4 and 6.4 percent respectively. Even considering the civilian labor force (those people who are employed or unemployed), only California, Florida, and New York saw an absolute growth in size that exceeded Arizona.

	Civilian Labor Force June 1986	Growth Since June 1985
California	13,373,400	423,500
Florida	5,655,500	342,200
New York	8,489,500	220,400
ARIZONA	1,590,600	121,000
Ohio	5,259,300	113,600

Considering our size and our top performance in creating jobs both in 1984 and 1985, the local economy remains strong and growing.

Being the middle of summer, employment tends to be influenced more by seasonal factors than anything else. Of particular note this month is the return of approximately 4,000 American Telephone and Telegraph (AT&T) strikers. With the strike now settled, employment levels have returned to normal in sectors of manufacturing, public utilities, retail trade, and services. Just as it masked actual activity last month when the strike was in progress, the return of strikers overstates current job growth.

The two brightest spots in Arizona's economy remain the construction and the finance, insurance, and real estate industries. Both are at record levels and continue to grow monthly. Although there has been some indication of slowing, current activity is strong. Building permits and dollar value of construction have declined, but that will probably not impact immediately on the economy. Still, some slowdown is inevitable.

In manufacturing, the electronics and aerospace sectors both recorded some slight growth. While the recovery in electronics remains elusive, employment has begun to stabilize with some companies beginning to cautiously hire staff. Increasing international competition and a slowdown in demand for components has kept prices low and inventory tight. That situation will probably not change dramatically in the months ahead. And coupled with a slowdown in hiring for defense projects, this will keep overall manufacturing growth below average.

Elsewhere, industry employment changes were either small or dominated by seasonal influences. In mining, averting a strike helped to maintain stable employment for the first time in over 30 years. But problems still persist. After stable employment for three months, another 100 jobs were lost in copper mining in July. Apparently, attrition will continue to reduce employment. And since industry employment has declined by 10 percent in the first seven months of 1986, the bottom has clearly not been reached.

In trade and services, employment was weak as hot weather slowed overall activity in both the Phoenix and Tucson areas. Summer tourism activity still is doing well in the state's northern counties and along the Colorado River, but not to the extent that some people have expected. Still, the outlook is good. A growing population and the arrival of winter tourism activity will soon provide additional strength. Many new resort accommodations will be available this winter and into next year, both in the Phoenix and Tucson areas. This is expected to supply a steady source of jobs to the economy.

While it has been mentioned before, it bears repeating again. Our rising unemployment is not so much an indication of economic weakness as it is a barometer of our growing attractiveness for job seekers. An existing pool of available labor and the growth of business activity in the state will continue to attract more business.

Dan Anderson

New Developments

"New Developments" is featured each month as a service to employers and job seekers. It is a compilation of public announcements of the more significant new construction, grand openings, major hirings and layoffs, and other employer events that have special significance for Arizona labor markets. The announcements are paraphrased and otherwise edited from articles published in newspapers and other periodicals from throughout the state. "New Developments" are limited to space available, and no attempt is made to compile an exhaustive list of all such events that have occurred during the month.

CONSTRUCTION - Plans are in the making for a new 62-mile section of west Phoenix to be called "Estrella Village," named after the Estrella Mountains to the southwest of the planning area. Estrella Village will be bounded by the Aqua Fria River, the Salt River, the Papago Freeway (I-10), and the Black Canyon Freeway (I-17). Some of the cities currently in that area are Avondale, Tolleson, and southwest Phoenix.

BRW Incorporated is the consulting firm which will submit a land-use plan with three alternatives in early 1987. Early projections for the area indicate that the Estrella Village development will involve a $14.3 billion investment--complete with 96,000 housing units, 84 million square feet of industrial space, and 23 million square feet of commercial and retail space. Currently, three-fourths of the designated village area is farmland with industrial development lining major streets.

According to Phoenix Council member Mary Rose Wilcox, "This has been a hidden area that nobody wanted to touch. The city had basically designated it as an industrial corridor." She adds, "The whole area is ripe for a different kind of development." Peter Martori, chairman of the Estrella Joint Planning Committee, predicts that Estrella Village will eventually have about 225,000 residents and will create some 245,000 jobs.

Plans for an ambitious redevelopment project called the "Willetta Project" will be delivered to the Phoenix City Council by the end of September. The project is expected to cost $80 million when completed. Bounded by East McDowell and East Culver streets and 12th and 13th streets, the Willetta Project will include a 200-room hotel which may be as high as 15 stories, three mid-rise office buildings south of the hotel, and two multi-level parking garages south of the office buildings. The project is just to the east of Good Samaritan Hospital and Medical Center.

McDonnell Douglas Realty Company, the real estate subsidiary of McDonnell Douglas Corporation, announced at the beginning of August plans for development of the Dover Industrial Park in Mesa. Plans call for a light industrial/office park with retail, hotel, and restaurant space to be built in the 70-acre park at the northwest corner of McDowell and Greenfield roads. McDonnell Douglas purchased the industrial park for $10.2 million recently. Construction should begin in early 1987.

Sewer, water, and drainage improvements were about half completed at the beginning of August on the first phase of the 100-acre "Litchfield Greens" project being developed by Westinghouse-Goodyear Properties.

The site is located just east of Litchfield Road and south of Camelback Road, adjacent to the Wigwam Resort. Phase I improvements are expected to total $4 million and Phase II improvements will be about $2 million. Groundbreaking on the first homes in Litchfield Greens was expected in late August and total improvements to the area should be completed by November.

MANUFACTURING - A Huck Manufacturing Company division has acquired a new, 70,000 square-foot plant in Tucson to produce aerospace fasteners. Huck will begin moving machinery into the plant in Butterfield Technical Center towards the end of this year, and production is expected to start early next year.

The fasteners are used in most major military and commercial aerospace projects here and abroad. More than 30,000 Huck stainless-steel blind rivets hold the wing skin in place on the National Aeronautics and Space Administration space shuttles. They also are used in F-16 and F-14 fighter jets, B-1B bombers, and many commercial aircraft.

An employee training program wil begin in September, according to Joseph Hood, the plant's manager. Production will begin with about 75 skilled operators. Employment is expected to grow to about 200 by late 1987.

The YA Hopi Hat Factory was opened on July 15 on the Hopi reservation just outside Winslow. The factory is a joint venture between the Hopi tribe and the Young An Headwear Corporation, a Korean business. S.H. Baik, president of the corporation, stated that this venture was not just for money but also for job training. His vision for the future includes small piecework factories located near the Hopi villages.

According to Bernice Navakuku, personnel manager for YA Hopi, 15 employees have been hired, and the number is expected to increase to 120 by the end of the first year.

LAYOFFS - In early August, the Environmental Protection Agency (EPA) gave Phelps Dodge Company permission to resume operations at its Douglas smelter which had been shut down July 9 due to noncompliance with federal sulfur dioxide standards. That move had temporarily laid off about 350 smelter employees. However, those of the 350 who did return are facing a permanent layoff January 15, 1987, when the facility is ordered by the EPA to shut down permanently--and in the meantime, to operate at new low pollution levels.

Phelps Dodge officials promised to cooperate with efforts by state and federal agencies to retrain smelter workers and to help them find new jobs. The company also promised to provide severance and medical benefits for up to six months after the smelter closes.

Hughes Aircraft Company will reduce its Tucson workforce by about 400 employees--less than 5 percent--by the end of the year. Most of the laid off workers are in salaried engineering and administration support positions not directly related to production. Despite the layoff, Hughes expects to hire some new personnel with "critical skills such as certain computer programming skills...some real specialized applications," according to spokesman Michael Letson.

Arizona Labor Market Newsletter
LABOR MARKET INFORMATION PUBLICATIONS
Site Code 733A
P.O. Box 6123
Phoenix, Arizona 85005

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USPS
CONGRESSIONAL INF. SERVICE
CHERYL WALDMAN
4520 EAST WEST HIGHWAY
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10/27/86 50465-1

ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. X No. 10
October 1986

Unemployment Rate

Seasonally Adjusted
August*

ARIZONA	6.7%
Maricopa Co.	5.3%
Pima Co.	5.4%
United States	6.8%

Consumer Price Index

National-August
1967 - Base Year

Wage Earner/Clerical
Worker - 323.4
% Chg. Yr. Ago 1.2

All Urban - 328.6
% Chg. Yr. Ago 1.6

Phoenix-2nd Qtr. 1986
1977 - Base Year

All Urban - 192.6
% Chg. Yr. Ago 0.9

Tucson-2nd Qtr 1986
1st Qtr. 1983 - Base Qtr.

All Urban - 116.0
% Chg. Yr. Ago 1.0

* Preliminary

Education and Training in Arizona

Nancy Augustin and Barbara Keene, editors
Connie Gonzalez and Linda Van Calcar, word processors

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Because of time limitations, it was impossible to verify all of the data presented in the following articles. The data, analyses, and opinions expressed are those of the authors and do not necessarily reflect those of the Department of Economic Security.

Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

The Challenge

Society changes. It is a fact of history--fact of technology--and one that we would not really want to alter. These changes, however, impact in ways that we frequently overlook and, in overlooking, we do ourselves a disservice. Let us look for just a minute at the changing labor force.

Our economists and our futurists seem to share a vision of an economy which can only be borne by a "new worker"--an intelligent, educated, literate worker who is skilled and trained to shoulder the new era. It is just this fact that should be emphasized. It is just this that we dare not overlook.

The first fact about the new worker is that there are fewer and fewer of them. It was estimated in 1960 that there were eight prime-age adults (21-64 years of age) to every person over 65 years of age. In the year 2000, the ratio of prime-age adults to elderly will be 4.4 to 1. By the time the so-called Baby Boomers reach retirement age, 2025, the ratio will be 2.8 to 1. These ratios are optimistic and they clearly demonstrate that there will be fewer and fewer people in the work force to support a "retired" population.

We know, then, that the new worker will be a scarcer resource and, to an extraordinarily increasing degree, he and she will be what we today term "minority", because it is this segment of the population that is increasing. Between 1960 and 1982 the percentage of all children younger than 15 years old fell by 7 percent. Between 1960 and 1980, people older than 65 years of age grew by 54 percent. One demographer concludes that the elderly population of the United States grew at a higher percentage rate than the total population of India. Today, 24 percent of those younger than 15 years are Hispanic or Black. Only 11 percent of those minorities are older than 65. The percentage of Hispanic children continues to increase. Between 1975 and 1983 there was a 15 percent growth of Hispanic children. Non-Hispanic children saw a decline in the period of 6 percent.

It seems evident that if the emerging new society to which we bear witness is to affirm its promise and become real, it is inextricably tied to a work force of sufficient literacy and education to shoulder it. The indications, however, are troublesome.

Among Black youngsters nationally, 21 percent of those between the ages of 16 and 24 are school dropouts. Two-thirds of Black dropouts come from families making less than $10,000. Two-thirds of Black dropouts come from families where the head of the household has less than a high school education. Census data indicate that in 1981, 36 percent of 18-19 year old Hispanic youngsters were high school dropouts, more than double the national average.

As a one-time policymaker leaving political office, let me offer no explanations. Let me offer only challenge. At the time most citizens who are productive today retire, the optimistic ratio of employed to retired will be 2.8 to 1. Those few employed, if current trends continue, will likely be Black or Hispanic, functionally illiterate, dropouts, and questionably capable of maintaining not only themselves but also of maintaining the ever-increasing elderly population.

We must now invest and risk as much in education as we once did in dams, canals, mines, farms, and merchants who served them all--investments in inner-city schools, bilingual education, special education, gifted programs, high risk populations, higher education, minority retention and recruitment, education for the developmentally disabled, and most of all, in our children and their teachers.

Demographic trends are not inexorable ends. They are merely hints of what we can alter if we choose to. The future is only at risk if we choose not to risk.

Senator Alfredo Gutierrez

Education in Arizona's Secondary Schools for Jobs

Introduction: By Barbara Border, Deputy Associate Superintendent-Vocational Education.

Arizona has a dynamic economy combined with changing technologies. In such an economy the greatest challenge is to assure that the student is trained to carry out the tasks reflecting current technology as required by the employers, and this is exactly what vocational programs in Arizona's secondary schools are accomplishing.

Several key elements appear to be the reasons for success. One element in the success of Arizona's vocational education programs is a close working relationship with business and industry--especially through advisory councils. A second key element in this success is the leadership role that the Vocational Education Division of the Arizona Department of Education (ADE) is providing in vocational preparation, guidance, planning, technical support, and promotion of education and business cooperation. One of the most dynamic ventures with business and industry has been the validation of skills and tasks with workers in business and industry for the 40 most needed occupational job clusters.

In July 1985, the State Board of Education/Vocational Education approved program standards for each vocational education program. This leadership from the Board and ADE will ensure that students receive a high quality training program which will prepare them for business and industry as new employees.

The Vocational Education unit of ADE provides support in six vocational preparation areas which focus training efforts on the top 40 occupational clusters in Arizona. The six areas of Vocational Education providing this training include:

Agriculture Education.
Business and Office Education.
Health Education.
Occupational Home Economics Education.
Marketing Education.
Trade and Industry Education.

Related training and support services are also offered by:

Consumer and Homemaking Education.
Special Needs Support Services.
Vocational Guidance.

For each of the preparation areas mentioned above, a knowledgeable state supervisor or specialist is responsible for working with schools across Arizona. These supervisors and specialists provide direction for new trends and innovative ideas in their occupational areas for Arizona's schools. Each was invited to write short updates on trends and developments in their areas for this newsletter.

Agriculture Education: By Richard Condit, State Supervisor-Agriculture.

Vocational agriculture programs provide for competency skill development in four occupational cluster areas: Agriculture Business and Management, Horticulture, Agriculture Mechanics, and Renewable Natural Resources. There are 48 high school and eight community college programs of vocational agriculture in Arizona. Total enrollment in these programs is approximately 4,500.

The general public's concept of agriculture is confined to production agriculture (farming and ranching). Most people are not aware that agricultural jobs include landscaping, working in a plant nursery, Forest and Park Rangers, and sales and management positions in businesses that process or distribute agricultural products. Agriculture continues to employ in excess of 20 percent of the people in this country. Contrary to popular opinion and continuing the trends of the past 15 years, agricultural employment in Arizona continues to expand in terms of actual numbers of people employed.

In Arizona, Agriculture Business and Management constitutes 72 percent of the total employment while Horticulture, Agriculture Mechanics, and Renewable Natural Resources represent 15, 11, and 2 percent respecttively. The areas of Agriculture Business and Management and Horticulture offer the greatest opportunites for agricultural employment in our state. Horticultural employment has shown a rapid increase in the past six years in excess of 80 percent.

Agriculture Business and Management which includes jobs in input industries to production agriculture and the distribution and processing of agricultural products also shows expansion in employment. The expansion in employment in this occupational cluster is not, however, in the production component which appears to be neither growing nor declining but in the input, distribution, and processing jobs.

The need for employees possessing agricultural competencies continues to grow in Arizona, in spite of rapid urbanization and economic hard times in production agriculture. Arizona's vocational agriculture programs are striving to keep pace with the dynamic nature of the state's agricultural employment.

Business Education: By Janet M. Gandy, State Supervisor-Business, and Joanne Walker, Assistant State Supervisor-Business.

The labor market demand for administrative support positions in business offices has increased. This increase has resulted from today's expanding and fast-paced technology and has a definite impact on the primary goal of vocational business education, that of providing students with entry-level competencies to obtain jobs which will allow them to move upward on their career ladders.

In the Vocational Education Unit of ADE, we facilitate and lend direction to the business education programs throughout secondary and postsecondary schools in Arizona. As facilitators, we offer technical assistance and consultation to teachers, boards, advisory committees, school administrators, and business people in discussing business programs, program standards, trends, and current methodology.

In supervision of business programs, we provide technical assistance in the development of instructional programs by local teacher and/or educational agencies. At present, the Accounting Cluster curriculum is completed and parallels the validated occupational competencies; also, the Administrative Support Cluster curriculum guidelines are being developed this year and should be ready for dissemination by October.

Since administrative support and accounting and computing occupations are in the top ten in job demand in Arizona, greater emphasis is being placed on the guidelines and workshops in these areas. During 1985, Arizona was short over 9,000 Administrative Support Occupation program completers. This represents significant job opportunities for high school graduates in these areas, if students receive training in the job-entry skills. In a recent study of Arizona employers of high school vocational students, approximately 80 percent rated these students' work attitudes and work quality better than average.

A direct link with industry is provided through the Arizona Business Education Advisory Council. We meet with the council and various educational and private groups to discuss business programs which help us validate the strengths and weaknesses of programs in business and assist with improvement of these programs. This also allows us to determine needs in business programs relative to the competency list and the state plan for vocational education. Industrial input of their needs and sharing of information on business program enrollments through follow-up surveys lets us distribute data to districts to assist in determining any necessity for curriculum changes. Information is also made available on facilities, facility layout, and equipment.

An integral part of the business curriculum in Arizona is the activities of Future Business Leaders of America/Phi Beta Lambda

(FBLA/PBL). FBLA/PBL stresses leadership, citizenship, self-image, and social activities on both local and national levels. On the state level, we serve as advisors by meeting with business people and local organization advisors interested in the program to help with communication, planning, organization, and competition. Business education programs meet the needs of Arizona's employers.

Health Occupations Education: By Ellen Pearson, State Supervisor-Health.

Vocational Health Occupations Education (HOE) bridges the gap between education and the world of work, allowing students to acquire academic skills while achieving the skills required for employment and career mobility. Secondary health occupations programs utilize an articulated, competency based curriculum. The programs provide both campus and industry-based learning experiences and require cooperation between the schools and the health care industry.

The ideal course sequence for a secondary HOE program is as follows: Tenth-grade students complete a Health Careers Cluster Course which helps them clarify career goals and combines classroom instruction with on-the-job experience, for the purpose of mastering both validated core competencies and the competencies for an entry-level health assistant. Twelfth-grade students obtain entry-level training in areas of health that need additional training such as Nursing Assistant and Practical Nurse. Additionally, twelfth-grade students may enroll in a Health Careers Cooperation Education Course. Students can participate in Vocational Industrial Clubs of America (VICA) which is an integral part of the HOE program.

The overall program goals for secondary health occupations education include providing students the opportunity to explore health care occupations, to matriculate into postsecondary health occupations education, and to become employed in the health care field.

Postsecondary health occupations education in Arizona prepares and updates people for employment and upgrades those already employed in over 30 health careers. This education occurs in the state's community colleges, skill centers, and private technical schools through the following options:

- The associate degree program provides broad training in which students must meet general education requirements in the sciences, humanities, and arts as well as the major area of specialization in a health occupation.

- The certificate program provides training in the major area of specialization in a health occupation.

- Refresher courses are short-term occupationally-specific courses designed to update current practitioners or to prepare individuals who have been out of the labor market for a period of time for reentry. Refresher courses in nursing are the most commonly offered adult courses to help individuals reenter the health field.

- Upgrading courses are short-term and designed to help individuals advance within their health field. Training in advanced skills, new technology, and management skills is provided.

In addition to meeting regional accreditation standards, health occupations programs must meet requirements of the official state board of the relevant health profession.

Occupational Home Economics Education: By Mary Lewkowitz, State Supervisor-Occupational Home Economics.

Arizona's second largest employer, the hospitality industry, has a need for trained employees who see positive career opportunities and desire to use this industry as a profession. Occupational home economics programs are training students to meet the challenge of the hospitality industry employment needs.

The first step in meeting this training need has been the identification and validation of competencies needed by workers in the industry. To do this task, over 150 employees working in the hospitality industry have reviewed, improved, and rated a list of competencies needed for successful employment and advancement. These validated competencies have been distributed to all interested trainers throughout the state. In addition, the competencies are used as the basis for program development, curriculum writing and in the final analysis, in evaluating student progress in the classroom.

Occupational home economics training for the hospitality industry addresses two key employment areas:

1. Lodging operations--housekeeping, custodial, and recreation.
2. Food and beverage operations--food production and food service.

Program completers have been trained in job skills, attitudes, basic skills, and responsibility skills identified as essential for successful career development in the industry.

Occupational home economics also trains skilled workers for other high employment demand areas in Arizona. These occupational clusters include child care and guidance; fashion construction, coordination, and sales; and home furnishings. Occupational home economics students are primarily trained for service occupations, many of which impact on the Arizona tourist industry.

Marketing Education: By Dave Muehlbauer, State Supervisor-Marketing.

Virtually nothing happens in our economy until a product or service is sold. Our economic well-being is dependent upon an effective process of marketing to match the goods and services which are produced with consumers who are willing to buy them. Across the country, employment in marketing occupations represents a large and growing number of employment opportunities. In Arizona, with our strong emphasis upon tourism, this is especially true as sales and marketing occupations represent the largest category of employment.

Marketing education programs at the high schools and community colleges serve to prepare students for careers in sales, marketing, management, and entrepreneurship. The programs serve students who are seeking employment for the first time, as well as those who are upgrading their skills. One of the fastest growing areas of interest within marketing education is the area of entrepreneurship. Within the past few years, an increasing number of high schools have been offering specialized programs in entrepreneurship and small business management. With this focus, students will be creating their own employment opportunities rather than limiting themselves to jobs in existing organizations.

Enrollment in marketing education programs at the secondary level is increasing with approximately 3,700 students involved in programs offered at 59 high schools. Community college and adult programs serve an additional 23,000 students, in both credit courses and specialized workshops and seminars.

Instruction in marketing education programs is based on the skills identified for marketing occupations, and verified by representatives of marketing businesses. One of the most effective methods of instruction at the high school level is cooperative education, where students are provided a coordinated training position in an actual marketing business. Students involved in this type of experience not only develop and refine their sales and marketing skills, but they also improve the important human relations and communications skills which are critical to success in the field of marketing.

High school marketing education programs also provide a unique set of experiences for students through the Distributive Education Clubs of America (DECA) student organization. DECA provides students the opportunity to organize and operate a professional organization involved in personal development, leadership, and community service. Student membership in DECA has reached 2,800 members. During the 1985-1986 school year, over 1,000 students attended the State DECA Conference and participated in a series of competitive events directly related to specific marketing occupations. Several of these students went on to receive outstanding recognition at the National DECA Conference, with four national award winners and eight additional students receiving special recognition.

Marketing education is a growing program, serving an increasing number of students with a quality instructional program.

Trade And Industrial Education: By Ken Thompson, State Supervisor-Trade and Industry.

Arizona trade and industrial education is healthy and on the move. We can make this statement at a time when all we hear is, "programs are being dropped, declining enrollments are a fact, and increased academic requirements are preventing students from taking their electives in trade and industrial education." All these are valid, yet we are optimistic about the future of trade and industrial education.

That optimism is based on facts. Enrollment in trade and industrial education has increased by over a thousand during FY86. School districts are trying to find ways to provide math and/or science credit for students taking trade and industrial programs. During June of 1985 and 1986, we hosted the National VICA Leadership Conference and U.S. Skill Olympics (the largest in Phoenix and the history of VICA) which gave our programs visibility that can never be duplicated. A few facts about the event are:

- 6,000 students were registered.
- 9,000 people were in attendance.
- 2,000 business-industry-educators helped put on the conference.
- 300,000 square feet of floor space was used.
- Every meeting room at the Phoenix Civic Plaza, Hyatt Regency, and Phoenix Hilton was used.
- 15 hotels were booked.
- 3,000 sleeping rooms were used.
- 7 million dollars worth of equipment and supplies were made available by business and industry from Phoenix and other parts of the country.
- 38 contests were held in the areas of leadership, trades, and health occupations.
- Over 3 million dollars were brought into the economy of Phoenix and Arizona because of this convention.
- At peak travel times, 48 city transit buses were used to transport attendees from their hotels to functions at the Civic Plaza.
- Arizona members won five first places, one silver, and one third place during the 1986 conference.

The future of trade and industrial education is bright, but there is a price to pay. Our state legislators have provided additional funding, but it must go to the support of programs meeting the newly mandated "State Standards for Trade and Industrial Education." Finally, everyone must realize that academic education is very important, but as President Reagan stated, "no more important than vocational education." Trade and industrial education is showing everyone that there is dignity and professionalism in learning and working in a trade, service, or industrial occupation.

Consumer and Homemaking Education: By Kathleen Gushgari, State Supervisor-Consumer and Homemaking.

Consumer and homemaking education in Arizona, as in the rest of the United States, is at a crossroads. Today's changing environment challenges home economics educators to analyze where home economics is and undertake innovative strategies for advancement based on pertinent technology and social trends.

Arizona has accepted this challenge and developed the Arizona Vocational Home Economics Essential Living Skills, a listing reflecting essential skills and competencies, enabling students to develop as fully-functioning persons and family members. In determining what knowledge would lead to this goal, educators explored and implemented those competencies which will ensure individual and societal survival, productivity, and growth. Approximately 22,000 students, in 138 consumer and homemaking programs, are being taught competencies which are essential for:

- Managing scarce family resources.
- Expressing personal and family goals and relating them to the good of society.
- Evaluating options and making decisions.
- Coping creatively and constructively with crises.
- Experiencing opportunities which provide for the development of a positive self-image and for intellectual, emotional, and social growth.
- Feeding individuals a diet which is nutritionally sound.
- Providing shelter and clothing which protect and enhance self-image.

With the aid of Future Homemakers of America (FHA), a vocational student organization based on the values and concepts of home economics, our consumer and homemaking programs are meeting these competencies and much more. FHA offers the structure necessary to provide students with actual practice in decision-making, problem solving, and leadership.

Consumer and homemaking education is in the unique position of teaching skills valuable to the work place as well as the home. Developing and initiating competencies, justified by societal trends and technological advances, secures consumer and homemaking positions in the educational system while simultaneously improving the quality of life for students involved in the program. These students, in turn, will make the real difference in the future of family life in Arizona.

Industrial Arts/Technology Education: By Hoyt Kenmore, State Supervisor-Industrial Arts and Macke Williams, Assistant Supervisor-Industrial Arts.

Industrial arts/technology education is that portion of industrial education that provides competencies of an exploratory nature for students normally in grades 7-12. It is designed to assist students in developing a decision-making foundation for educational and occupational planning.

Arizona's industrial arts education is rapidly changing from traditional courses such as drafting, woods, metals, plastics, and auto to programs of transportation, communication, construction, and manufacturing. The changes are necessary for the preparation of students to meet the challenges encountered because of modern technological advances within industry. By addressing program clusters, the courses will include experiences in broader occupational areas.

While declining enrollment is a problem in many schools, the trend appears quite different in those schools that are attempting to provide quality industrial arts/technology education programs. Since American Industrial Arts Student Association (AIASA) activities are an integral part of the program, it is not surprising to observe the increasing AIASA membership within Arizona.

Many curriculum materials (both teacher-developed and commercial) are available to assist schools with program improvement within industrial arts/technology education. For additional information, contact Hoyt R. Kenmore or Dr. Macke A. Williams of the Arizona Department of Education at (602) 255-5565.

Special Needs Education (For Disadvantaged, Handicapped, and Limited English Proficiency Students): By Jerry D. Bowman, Director of Program Support for Special Needs.

One of the Eskimo tribes, it is said, had no name for snow but instead had many names for the different kinds of snow that they experienced. To an anthropologist on his first visit, this diversity of names for snow was baffling; yet to the Eskimos, the anthropologist's general term "snow" was indiscriminate and confusing.

I am often reminded of this story because, like snow, vocational education can take many forms and can be delivered to students in many different ways. Instruction designed to meet the needs of students has been the clarion call of vocational educators. We can take pride in our accomplishments. We, like the Eskimo tribe, have recognized and responded to the "different kinds of snow."

The Carl Perkins Vocational Education Act, P.L. 98-524 has as one of its main purposes the assurance of equal access to quality vocational education programs for special needs populations. In order to serve our clients, it is important to understand how these funds are earmarked for special needs populations. The majority of the money allotted through this Act goes to the state for either "vocational education opportunities," which are to provide services for special needs populations, or to "vocational education program improvement, innovation, and expansion," which supports improvement, not maintenance, of existing vocational education programs. These funds are limited to pay 50 percent of the cost of additional staff, equipment, materials, and/or services that are not provided in the regular vocational education programs. The funds are provided on a matching basis which means that the state and local education agencies must pay the basic costs of vocational education programs plus 50 percent of any additional costs necessary for students who are handicapped or disadvantaged to participate in vocational education.

It is also important to understand that the Carl Perkins monies for special needs populations are very meager. It is likely that no district has enough federal or state fiscal resources to meet all the special needs services and activities that are needed.

So the challenge is, once again, for the vocational education community to come up with ways to adequately serve the historically underserved student. Special needs students are as different as the different kinds of snow. We must learn how to identify the help these students need. We must discover or create the resources necessary to provide the needed help. But most importantly, like the Eskimos, we must understand the nature and wonder of many different and "special" kinds of students who find economic and societal success because of our teaching efforts.

Note: "Education in Arizona's Secondary Schools for Jobs" was prepared in collaboration with Hugo H. Soll, Manager, Occupational Information System of Arizona.

Measuring Vocational Education Performance

Educators have been attempting to measure the effectiveness of vocational education programs for years. Typically, these measurement efforts have consisted of post-completer follow-up surveys. This method is usually very costly, has a low response rate, and the information that is obtained can be inaccurate, particularly with respect to income. Arizona Governor Bruce Babbitt recognized the need for accurate data on vocational education programs, particularly by prospective students who were evaluating various training programs. Legislation was passed requiring the Center for Vocational Education at Northern Arizona University to produce an annual report on placement rates and income earned by people completing vocational programs in Arizona.

Initially, putting this kind of information together would appear to be an extremely difficult and expensive task. However, quarterly wages as reported by Arizona employers are available by social security number through the Department of Economic Security's Unemployment Insurance files. It was decided that each community college and private vocational school in the state would send the social security number of each program completer between July 1, 1983 and June 30, 1984 to the Center for Vocational Education. The Center then compiled the information onto a computer tape and forwarded it to the DES Research Administration. The program completer file was then matched with the DES wage file in order to determine the number of completers with earnings between July 1, 1984 and June 30, 1985 and the average and median reported earnings for the same period by educational program. In order to ensure the confidentiality of the income data, a program must have three or more people with earnings in order to be included in the report. The data was further aggregated into program clusters.

Table 1 presents cluster data for all completers in the study. The data indicate that 64.3 percent of completers lack earnings in Arizona during the study year. The automotive/diesel technology cluster had the largest number of completers (3,257) and the child care/teacher aide cluster had the fewest (7). The highest wages were earned by miscellaneous technologies completers while truck and bus

Table 1

CLUSTER	COMPLETERS	COMPLETERS WITH EARNINGS 1984-85	AVERAGE EARNINGS 1984-85	MEDIAN EARNINGS 1984-85
Acting/Dancing	54	45	$ 5,059.32	$ 3,917.42
Agriculture	93	74	5,712.04	4,941.39
Allied Health/Social Services	2,523	2,050	8,407.03	7,516.09
Automotive/Diesel Technology	3,257	1,202	6,659.28	4,624.20
Aviation	238	189	5,875.96	5,300.81
Business	744	577	9,072.97	6,645.96
Child Care/Teacher Aide	7	4	6,659.99	4,801.19
Communications	323	253	7,681.68	6,141.98
Construction	98	71	10,496.04	9,260.33
Data Processing	917	771	9,858.59	8,543.00
Drafting	679	416	9,510.15	8,906.97
Electronics/Electrical Tech.	1,734	1,238	11,456.42	10,087.03
Environmental Technology	1,073	642	10,777.79	9,423.21
Foods/Interior Design/Textiles	595	443	6,132.66	4,785.19
Manufacturing	571	462	9,348.12	7,864.93
Miscellaneous Technologies	258	182	12,700.51	10,580.27
Nursing	885	737	9,989.60	9,503.40
Secretarial/Office Occupations	1,119	900	7,214.39	6,736.60
Service Occupations	558	433	11,870.16	8,203.06
Truck and Bus Driving	958	127	5,022.99	3,848.94
Cluster Code Missing	214	42	9,713.41	8,319.47
TOTAL	16,898	10,858	$ 8,933.31	$ 7,471.50

NOTE--Only People with Wages Used in Calculating Averages and Medians.

SOURCE: Arizona Department of Economic Security, Research Administration.

driving completers earned the least. However, it should be noted that only 13.3 percent of truck and bus driving completers earned wages in Arizona, so the wage data may be misleading.

Clearly, the data has some limitations. First of all, only those completers who had earnings in Arizona are counted; therefore, the placement rate is relevant only to Arizona placements. Secondly, there is no way to determine if the person is working full-time or part-time. Lastly, it is not known whether the job requires the vocational training that the completer received.

Even with the limitations of the data, the report provides a wealth of information for educators, students, and policymakers. The report is available to the general public. For further information, contact the center for Vocational Education at (602) 523-5442.

David Sinclair

Impact of Private Vocational Education on Arizona

Asking the proverbial question "What does higher education mean to me?" of a graduating high school senior can render responses as unique as the individual being queried. A student's desire to be job-ready with marketable skills in the shortest possible time, combined with increased competition in the work world, makes forgoing traditional universities in favor of private vocational institutions an even more viable alternative for high school students in Arizona.

The impact of those who choose this route to further their educational goals is reflected by the growing number of licensed postsecondary schools in Arizona. According to the Arizona State Board for Private Postsecondary Education, approximately 120 of these educational facilities are in operation in Arizona, servicing 30-35,000 students. While this figure does not include private insurance and real estate schools or home study students, the total equals the number of students enrolled in any one of Arizona's major state universities.

Bachelor degrees are offered at 15 of these schools while 12 have occupational associate degrees. Curriculums are designed for various occupations which do not require a traditional college degree. Programs range from accounting and air conditioning to travel agent and word processing. Additional vocational training offered in Arizona private schools include business, computer, mechanics, and health care fields of study.

Course completion length varies according to curriculum content with many certificate programs averaging six months to one year. Private vocational students benefit from this approach to job-oriented education in two ways: 1) smaller classes allow for personalized attention with hands-on intensified training, utilizing "state of the art" equipment and 2) extraneous academic courses are eliminated or minimized, thus accelerating program completion time.

While enrollment at these private postsecondary institutions is primarily comprised of recent high school graduates, this educational alternative attracts adult men and women who must take stock of their marketable job skills when economic hardships and technological advances render their traditional occupations obsolete. The reentry women, those who may have interruped or delayed their careers in order to raise families or those who need to return to work because of the death of their spouse or divorce, are discovering the benefits from training offered at Arizona's private schools.

Maintaining and fostering legislation affecting quality educational standards in these schools, the Arizona Private School Association (APSA) was formed in 1967 as a voluntary organization of private schools offering job-oriented specialized training in business, trade, and industrial occupations. The Association is comprised of 70 nontax-supported educational institutions which provide career training services to the Arizona community. Common concerns among the APSA member schools focus on upgrading the quality of education in areas of enrollment practices, advertising, curriculum, and instructor training.

In order to demonstrate the economic impact of the private postsecondary educational industry in the state of Arizona, APSA surveyed its membership in January 1986. Survey findings indicate the following:

1) Based on 70 percent response, 1,539 employees (both full and part-time) work with APSA member schools.

2) Annual gross wages paid to these employees in 1985 was $26,208,754, averaging $17,029 per employee.

3) More than 80 percent of 1985 graduates from APSA member schools were employed in their field of study.

The effectiveness of Arizona private school educational programs is measured by the proportionate rate of job placement in Arizona of these private school graduates.

While no school can provide a 100 percent guarantee of job placement upon graduation, APSA member schools endeavor to gear their curriculums towards job-ready marketable skills. Career fairs, featuring companies that recruit their employees from students who attend private schools in Arizona, resume writing, and interview training are part of the ongoing activities presented by APSA member schools.

The occupational outlook is exciting for these Arizona private school graduates as studies indicate that 80-90 percent of employment opportunities in the next decade will require service and technical skills offered through training in Arizona private vocational institutions.

Robert D. Hartman, President
Universal Technical Institute

Vocational Education Program Helps Displaced Homemakers Avoid Poverty

Displaced homemakers are individuals who have been unpaid wives and mothers for a substantial number of years and are now displaced from that job because of divorce, separation, death, or disability of spouse. This makes it necessary for them to seek employment to support themselves and their family. Since 1978, PHASE (Project for Homemakers in Arizona Seeking Employment) has been funded through yearly grants from the Arizona Department of Education, Vocational Education Division, to address the needs of these displaced homemakers. The people who come to PHASE are primarily women aged 40-65. They have been, for the most part, out of the labor market for 15-20 years and are unsure of what they have to offer employers. If they have jobs, those positions are often minimum wage and entry-level, frequently without health plans, pension benefits, or career mobility. Without recent job skills, the displaced homemakers often need updated training and opportunities to acquire new skills. In addition, they need accurate labor market information to determine job demand and employment potential.

The image of an older displaced homemaker beginning her descent into poverty is very real, as seen daily in the new clients coming to PHASE. However, PHASE's comprehensive services help break this fall into poverty and welfare dependence. Typical services include individual vocational counseling, identification of skills and values, two-week Job Search Workshops, follow-up counseling, referral to training, or job placement. Throughout the process, PHASE personnel offer support and encouragement to help the person regain an identity and life direction.

The track record for PHASE is impressive. Since 1978, 3,026 displaced homemakers have been served. Within six months of completing the program, 63 percent have jobs, 31 percent are in training or educational programs, and 6 percent continue the job hunt.

A new dimension has been added to PHASE and other programs statewide that serve single parents and homemakers. With the enactment of the Carl Perkins Vocational Act in July 1984, a training component was instituted. Now all vocationally-funded single parent and homemaker projects can pay for training of their most economically disadvantaged clients. This training must be in high demand occupations and must lead to employment with benefits, a decent wage, and a future.

For many years PHASE was one of the only vocational programs to serve this population. As the demand for services increased, vocational education has been able to expand programs and services. Today PHASE continues to be a valuable resource for an increasing single parent and homemaker population. Thanks to PHASE and similar programs, displaced homemakers are regaining control of their destiny, are discovering unprecedented options, and are contributing to society in new and productive ways.

Jenny Erwin
State Equity Specialist

Diane Wilson
Director, PHASE

ASU, Thunderbird Offer Dual Degree Program in International Business

Arizona State University and the American Graduate School of International Management ("Thunderbird") have developed a dual degree program for graduate students studying international business.

"We believe this agreement represents a unique collaboration between public and private institutions," said ASU President J. Russell Nelson. "It expands the educational opportunities available to students pursuing careers in international business and makes the best use of the strengths of both institutions."

"This is the wave of the future in which public and private schools join forces, with the students benefiting," said William Voris, president of the Thunderbird School. "We expect to see more of this kind of thing around the country."

Cooperative education programs of this type are needed to help students meet requirements for increased knowledge in a wider variety of areas as they seek positions in today's rapidly changing business world, Voris explained. In addition, as the median age of the population increases, the pool of normal college-age students decreases, and schools are finding it necessary to offer attractive education opportunities that are best built on the strengths of more than one institution.

Approved by the Arizona Board of Regents in March, the dual degree program will begin in spring 1987. Students may begin applying for the program this fall. Students accepted to the new program will be able to earn a Master of Business Administration degree from ASU and a Master of International Management degree from Thunderbird by completing an approved program of courses at the two institutions. Full-time students can save from one semester to one year of study time through the dual degree program since they earn the MBA and MIM concurrently.

To qualify for the dual degree program, students must be accepted separately for admission to the MBA program at ASU, the MIM program at Thunderbird, and the dual degree program. It is expected that less than a dozen students will be admitted into the highly selective dual degree program the first semester.

The dual degree program was created in response to an emerging demand for business people with an understanding of international business. "As we move toward the 21st century, business leaders need not only an in-depth knowledge of basic business functions but also an ability to apply that knowledge on an international scale," said Voris. "This dual degree program provides an opportunity for selected students to have the best of both worlds."

According to Nelson, "This program offers much more than a regular business education and a language. It provides a strong business education with an emphasis in an area of international management selected by the student."

Designed to attract top students who can best take advantage of international business courses, the program offers students a variety of study. In addition to the advanced business courses available through the MBA program, ASU offers numerous courses targeted toward international business such as Economics in Developing Nations, Economics of the Soviet Union and Eastern Europe, International Transportation, International Finance, and Competitive Business Strategy. The wide range of Thunderbird courses from which students may choose includes International Marketing Research, International Marketing Management, Multinational Business Management, International Trade Administration, and Cross Cultural Communication for International Managers.

The ASU/Thunderbird agreement also makes it possible for students to take up to nine semester hours of approved Thunderbird graduate courses as international business electives within ASU's MBA program. MIM students at Thunderbird will be able to take up to nine hours of approved ASU coursework as part of the Thunderbird program. Normally, schools will accept only six hours of coursework from other universities.

Courses can be taken at no additional tuition charge. The student is charged tuition only at his or her school of principal attendance. The number of students who can participate in the cross registration is limited each semester, and a student can cross register for only one course per semester, unless deans of both schools concur in granting an exception.

Both ASU and Thunderbird have exchange study programs with schools in other countries. By way of example, ASU has agreements with Escole Superieure de Commerce de Nantes (ESC Nantes) in Nantes, France, and the Centre d'Ensergnement et de Recherche Appliques au Management (CERAM), near Nice, France. Thunderbird has a cooperative study agreement with Escuela Superior de Administracion y Direcion de Emtreses (ESADE) in Barcelona, Spain.

ASU's agreement with CERAM and ESC Nantes enables students from these colleges to earn an MBA from ASU after completing the required coursework. By the same token, ASU students are offered the same opportunity to earn graduate credit at these other universities toward their ASU degree.

Under the Thunderbird/ESADE agreement, students complete 30 hours of required coursework at Thunderbird and 36 hours at ESADE to earn a MIM from Thunderbird and a master's degree from ESADE.

Marcia Townsend Hilliard
Arizona State University

Arizona Unemployment Insurance Activities--July 1986

	July 1986	June 1986	July 1985	% Change From One Year Ago
Arizona Claimants Served*	34,622	33,503	31,633	9.4%
Arizona Average Weeks Unemployed**	8.6	8.5	8.5	1.9%
Arizona Benefits Paid*	$ 12,795,475	$ 11,035,491	$ 9,787,353	30.7%
Arizona Trust Fund Balance	$375,057,697	$371,365,100	$303,731,428	23.5%

*All Programs **UI Only

The Arizona Labor Force in August

The statewide unemployment rate for August dropped below the national average after having risen above it for the first time in over three years during July. Led by declines in the unemployment rate for Pima County and all but one of the rural counties, Arizona's unemployment rate is back to its level of a year ago and is comparable to rates experienced before the summer began. A combination of slightly rising employment and a substantial decline in the unemployed, probably the result of students and others withdrawing from looking for a job, contributed to the overall improvement. With statewide unemployment of 6.7 percent and unemployment in Maricopa and Pima counties at 5.3 and 5.4 percent respectively, the unemployment picture is back on track with earlier forecasts.

The state's employment growth in August, considering the stagnant to declining experience we usually observe at the end of the summer, was quite encouraging. During the summer, and particularly in August, hot weather and vacations keep employment from growing. But the early arrival of seasonal agricultural employment (citrus and chilies), along with preparation for the opening of another school year, all helped to temper expected losses.

The manufacturing industry has been an area of concern for many months, but August recorded a number of bright spots. Both the electronics and the aerospace industries each increased employment by 200. While these are both moderate increases, they do indicate that there is growing stability in segments of this industry. Additionally, the processing of citrus and chilies helped the Cochise and Yuma county economies to gain strength.

Recently, the construction industry has been showing signs of weakness. Not only has employment been growing slowly, but vacancy rates have been rising and building permits issued have been falling. This month, employment in construction declined by 400, as Maricopa County lost 500 workers and Pima County gained 100. If the peak has not yet been reached, it likely will be reached soon. Losses in industrial and commercial building activity will probably not be offset by the residential sector. As cooler weather arrives in the northern counties, little new building activity will be started there.

Elsewhere, the state's service-producing industries continued to perform quite favorably. With the arrival of a new school year, many companies had brisk business selling clothing, school supplies, and related items. In addition, schools brought maintenance staff and some instructors back early to prepare the school for another year. In terms of actual employment levels, activity in most sectors, except government, would probably be considered poor. But since larger losses had been expected due exclusively to the time of the year, activity for August has to be judged as good.

In summary, August was influenced principally by seasonal factors. In manufacturing, food processing related to citrus and chilies accounted for most of the job growth. The opening of school for another year helped employment in government and many sectors of retail trade. But those are only seasonal influences that will pass as quickly as they arrived.

On a more long-term basis, there was both positive and negative news. The positive news was the growth in employment shown by both electronics and aerospace companies. While the overall numbers are small and do not indicate a significant expansion, they do bode well for the future. But on the downside, construction employment seems to be near its peak, if not past it. Precipitous declines are not expected, but steady losses are probably forthcoming.

Nationally, the debate over economic policy and performance for the next one to two years is intensifying. Few economists expect a recession in the near future, but the range of expected performance is large.

Dan Anderson

Arizona Labor Force and Employment

August 1986 (in thousands)

	ARIZONA			-- Amt Change --	
	Aug.* 1986	Jul. 1986	Aug. 1985	Jul. to Aug.	1985 to 1986
TOTAL CIVILIAN LABOR FORCE**	1587.1	1592.4	1452.7	-5.3	+134.4
Total Unemployment	109.9	117.1	100.7	-7.2	+9.2
Rate	6.9	7.4	6.9	---	---
Rate (Sea. Adj.)***	6.7	7.0	6.7	---	---
Total Employment	1477.2	1475.3	1352.0	+1.9	+125.2

The Above Labor Force Statistics Should N

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

TOTAL WAGE AND SALARY	1335.4	1331.6	1262.3	+3.8	+73.1
Manufacturing	185.2	183.5	182.2	+1.7	+3.0
Durable Goods	145.6	145.0	144.0	+0.6	+1.6
Stone, Clay and Glass	8.2	8.1	8.0	+0.1	+0.2
Primary and Fabricated Metals	16.2	16.2	17.3	+0.0	-1.1
Primary Metals	7.7	7.8	7.9	-0.1	-0.2
Fabricated Metals	8.5	8.4	9.4	+0.1	-0.9
Machinery	65.3	65.1	68.2	+0.2	-2.9
Other Durable Goods	55.9	55.6	50.5	+0.3	+5.4
Aircraft and Missiles	27.0	26.8	23.0	+0.2	+4.0
Lumber and Wood Products (Except Furniture)	7.6	7.6	7.6	+0.0	+0.0
All Other Durable Goods	21.3	21.2	19.9	+0.1	+1.4
Nondurable Goods	39.6	38.5	38.2	+1.1	+1.4
Food and Kindred Products	9.6	9.1	8.8	+0.5	+0.8
Apparel	4.5	4.6	4.8	-0.1	-0.3
Printing and Publishing	15.2	15.2	14.3	+0.0	+0.9
All Other Nondurable Goods	10.3	9.6	10.3	+0.7	+0.0
Mining and Quarrying	10.6	10.6	11.9	+0.0	-1.3
Copper Mining	8.1	8.1	9.3	+0.0	-1.2
Other Mining and Quarrying	2.5	2.5	2.6	+0.0	-0.1
Construction	117.6	118.0	113.4	-0.4	+4.2
Trans., Communications, and Public Utilities	65.4	65.4	63.3	+0.0	+2.1
Transportation	29.9	29.9	28.8	+0.0	+1.1
Communications and Public Utilities	35.5	35.5	34.5	+0.0	+1.0
Trade	329.3	329.8	310.2	-0.5	+19.1
Wholesale Trade	66.1	66.1	62.4	+0.0	+3.7
Retail Trade	263.2	263.7	247.8	-0.5	+15.4
General Merchandise and Apparel	39.8	40.1	39.1	-0.3	+0.7
Food Stores	39.9	40.1	37.1	-0.2	+2.8
Automotive and Service Stations	33.9	33.8	31.1	+0.1	+2.8
Eating and Drinking Places	93.2	93.2	88.7	+0.0	+4.5
Other Retail Trade	56.4	56.5	51.8	-0.1	+4.6
Finance, Insurance, and Real Estate	91.4	91.1	82.0	+0.3	+9.4
Services and Miscellaneous	321.9	323.2	299.0	-1.3	+22.9
Hotels and Other Lodging Places	30.5	31.1	28.7	-0.6	+1.8
Business Services	74.6	75.3	68.1	-0.7	+6.5
Health Services	78.8	78.7	73.5	+0.1	+5.3
Other Services	138.0	138.1	128.7	-0.1	+9.3
Government	214.0	210.0	200.3	+4.0	+13.7
Federal	42.1	42.3	41.4	-0.2	+0.7
State and Local	171.9	167.7	158.9	+4.2	+13.0
School	90.4	84.7	83.6	+5.7	+6.8

* Preliminary

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

NOTE--Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment

August 1986 (in thousands)

MARICOPA COUNTY					PIMA COUNTY				
			-- Amt Change --					-- Amt Change --	
Aug.* 1986	Jul. 1986	Aug. 1985	Jul. to Aug.	1985 to 1986	Aug.* 1986	Jul. 1986	Aug. 1985	Jul. to Aug.	1985 to 1986
984.7	990.0	895.2	-5.3	+89.5	306.0	306.7	283.2	-0.7	+22.8
53.6	55.1	48.8	-1.5	+4.8	16.9	17.7	14.7	-0.8	+2.2
5.4	5.6	5.5	---	---	5.5	5.8	5.2	---	---
5.3	5.3	5.3	---	---	5.4	5.6	5.1	---	---
931.1	934.9	846.4	-3.8	+84.7	289.1	289.0	268.5	+0.1	+20.6

t Be Used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

Aug.* 1986	Jul. 1986	Aug. 1985	Jul. to Aug.	1985 to 1986	Aug.* 1986	Jul. 1986	Aug. 1985	Jul. to Aug.	1985 to 1986
881.5	883.4	828.4	-1.9	+53.1	238.0	237.6	228.2	+0.4	+9.8
131.4	130.1	130.7	+1.3	+0.7	32.8	32.9	32.1	-0.1	+0.7
104.9	104.2	104.5	+0.7	+0.4	27.4	27.5	27.0	-0.1	+0.4
5.0	5.0	4.9	+0.0	+0.1					
10.4	10.3	11.5	+0.1	-1.1					
51.6	51.4	54.1	+0.2	-2.5					
37.9	37.5	34.0	+0.4	+3.9					
26.5	25.9	26.2	+0.6	+0.3	5.4	5.4	5.1	+0.0	+0.3
5.9	5.8	5.7	+0.1	+0.2					
2.9	2.9	3.1	+0.0	-0.2					
10.7	10.8	10.3	-0.1	+0.4					
7.0	6.4	7.1	+0.6	-0.1					
0.5	0.5	0.6	+0.0	-0.1	1.6	1.6	2.3	+0.0	-0.7
82.2	82.7	78.5	-0.5	+3.7	22.6	22.5	22.2	+0.1	+0.4
43.1	43.2	41.3	-0.1	+1.8	9.7	9.8	9.5	-0.1	+0.2
20.0	20.0	19.5	+0.0	+0.5	4.9	5.0	4.4	-0.1	+0.5
23.1	23.2	21.8	-0.1	+1.3	4.8	4.8	5.1	+0.0	-0.3
225.0	225.6	210.7	-0.6	+14.3	54.7	54.9	52.0	-0.2	+2.7
53.1	53.3	49.9	-0.2	+3.2	7.7	7.6	7.6	+0.1	+0.1
171.9	172.3	160.8	-0.4	+11.1	47.0	47.3	44.4	-0.3	+2.6
25.4	25.7	24.9	-0.3	+0.5	7.0	7.1	7.0	-0.1	+0.0
25.2	25.4	23.5	-0.2	+1.7	6.9	7.0	6.3	-0.1	+0.6
21.8	21.7	19.7	+0.1	+2.1	5.8	5.8	5.3	+0.0	+0.5
60.3	60.1	57.3	+0.2	+3.0	17.6	17.7	16.5	-0.1	+1.1
39.2	39.4	35.4	-0.2	+3.8	9.7	9.7	9.3	+0.0	+0.4
72.1	71.7	64.2	+0.4	+7.9	12.8	12.9	11.7	-0.1	+1.1
218.4	219.6	200.1	-1.2	+18.3	59.0	59.3	56.1	-0.3	+2.9
16.4	16.9	15.5	-0.5	+0.9	5.0	5.1	4.6	-0.1	+0.4
61.5	62.0	55.7	-0.5	+5.8	10.4	10.5	9.7	-0.1	+0.7
53.1	53.0	49.0	+0.1	+4.1	16.0	16.0	15.5	+0.0	+0.5
87.4	87.7	79.9	-0.3	+7.5	27.6	27.7	26.3	-0.1	+1.3
108.8	110.0	102.3	-1.2	+6.5	44.8	43.7	42.3	+1.1	+2.5

-- Prepared by Labor Market Information, Research and Analysis (CPS, 1/86)

Nonmetropolitan Counties
Labor Force and Employment
August 1986

	Apache	Cochise	Coconino	Gila	Graham	Green-lee	La Paz
TOTAL CIVILIAN LABOR FORCE*.	15,400	36,850	41,000	12,425	7,775	2,925	4,725
Total Unemployment	2,575	2,625	4,075	1,700	900	325	825
Rate	16.7%	7.1%	9.9%	13.7%	11.6%	11.1%	17.5%
Rate (Seas. Adj.)**. . . .	16.9%	7.1%	10.1%	13.8%	11.3%	11.0%	-INA-
Total Employment	12,825	34,225	36,925	10,725	6,875	2,600	3,900

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Apache	Cochise	Coconino	Gila	Graham	Green-lee	La Paz
TOTAL WAGE AND SALARY. . . .	15,125	25,350	35,850	10,000	4,575	2,675	2,750
Manufacturing.	750	2,525	2,800	1,300	175	0	100
Mining and Quarrying	25	150	50	1,225	0	1,625	0
Construction	1,025	1,275	1,725	450	125	150	150
Trans., Comm., & Pub. Util..	1,750	1,675	2,425	375	150	50	50
Trade.	1,575	5,425	8,150	1,975	1,275	275	875
Fin., Insur., & Real Estate.	300	700	775	275	125	25	100
Services and Miscellaneous .	4,550	3,825	9,325	2,000	850	75	700
Government	5,150	9,775	10,600	2,400	1,875	475	775

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL CIVILIAN LABOR FORCE*.	28,275	28,225	34,675	9,825	34,675	39,650
Total Unemployment	2,450	4,650	4,300	1,850	2,125	10,975
Rate	8.7%	16.5%	12.4%	18.8%	6.1%	27.7%
Rate (Seas. Adj.)**. . . .	8.8%	17.1%	11.7%	16.2%	6.3%	-INA-
Total Employment	25,825	23,575	30,375	7,975	32,550	28,675

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL WAGE AND SALARY. . . .	19,000	20,400	26,150	8,125	22,525	23,325
Manufacturing.	2,575	1,975	3,450	1,400	2,425	1,575
Mining and Quarrying	275	1,125	3,350	0	575	50
Construction	1,300	1,150	1,400	375	2,050	1,650
Trans., Comm., & Pub. Util..	1,100	1,625	975	475	975	950
Trade.	5,375	3,850	4,800	3,050	5,700	7,250
Fin., Insur., & Real Estate.	950	350	750	250	950	900
Services and Miscellaneous .	4,075	5,750	2,775	1,150	5,000	4,400
Government	3,350	4,575	8,650	1,425	4,850	6,550

*Adjusted to the Current Population Survey (CPS) to reflect place of residence.
**Seasonal adjustment not applicable for economic assistance programs.

NOTE--Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs
August 1986

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,587,080	1,477,214	109,866	6.9%
Apache	15,403	12,826	2,577	16.7
Cochise	36,836	34,214	2,622	7.1
Coconino	40,993	36,921	4,072	9.9
Gila	12,426	10,737	1,689	13.6
Graham	7,777	6,879	898	11.5
Greenlee	2,929	2,603	326	11.1
La Paz	4,722	3,901	821	17.4
Maricopa	984,741	931,111	53,630	5.4
Mohave	28,266	25,817	2,449	8.7
Navajo	28,226	23,567	4,659	16.5
Pima	305,935	289,079	16,856	5.5
Pinal	34,678	30,379	4,299	12.4
Santa Cruz	9,840	7,978	1,862	18.9
Yavapai	34,657	32,540	2,117	6.1
Yuma	39,651	28,662	10,989	27.7

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators. NOTE--Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Estimated Hours and Earnings of Production Workers in Selected Industries in Arizona
August 1986

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVG. HOURLY EARNINGS		
	AUG.* 1986	JULY 1986	AUG. 1985	AUG.* 1986	JULY 1986	AUG. 1985	AUG.* 1986	JULY 1986	AUG. 1985
FOR THE STATE OF ARIZONA*									
Manufacturing	403.51	406.72	382.18	40.8	41.0	40.4	9.89	9.92	9.46
Aircraft & Missiles	INA	INA	INA	INA	INA	INA	INA	INA	INA
Food & Kindred Products	382.23	381.92	359.79	41.1	41.2	40.7	9.30	9.27	8.84
Primary Metals	526.10	520.08	498.88	40.5	39.4	39.5	12.99	13.20	12.63
Machinery	368.24	371.07	323.17	39.3	39.9	38.2	9.37	9.30	8.46
Copper Mining	511.41	555.29	561.00	40.3	40.8	40.8	12.69	13.61	13.75
Construction	427.93	432.59	447.38	35.9	36.2	37.5	11.92	11.95	11.93
Utilities	606.42	615.85	593.16	43.1	43.4	44.2	14.07	14.19	13.42
Retail Trade**	239.51	242.26	239.14	32.9	33.6	33.4	7.28	7.21	7.16
Wholesale Trade	382.54	386.06	363.24	39.6	39.8	39.1	9.66	9.70	9.29

* Preliminary

** Excludes eating and drinking places.

NOTE--These estimates are based on a sample of full and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

--Prepared by Labor Market Information, Research and Analysis (1972 SIC, 1/86)

Occupational Education in Arizona's Community Colleges

Occupational education (preparation for occupations requiring other than a four-year college degree that prepares individuals for immediate employment, more advanced preparation, or job and career changes) is one of six major objectives contained in the mission statement of the Arizona Community College System.

The System, comprised of 9 districts, 15 colleges, 29 campuses, 3 skill centers, and hundreds of instructional sites spread throughout all of Arizona's 15 counties, provides occupational training to approximately 88,000 individuals annually in over 1,400 job titles through 250 vocational programs approved by the State Community College Board.

The "typical" student served in an occupational program is a white female, 30 years of age, working full time, carrying a part-time load, attending in Maricopa County at a cost of $18.25 per credit hour.

Arizona's community colleges have a good record of responding in a positive way to the training needs of their communities. Postsecondary occupational education is constantly in motion, and this movement is not without direction. The State Community College Board, following involvement of the college districts in the development process, has adopted a position paper on occupational education in Arizona community colleges. The System has committed to an emphasis upon the following seven areas:

1. Training for Economic Development
   Community colleges work with business and industry to recruit a workforce, provide special training programs, provide technical assistance, and maximize resources by linking with other public agencies, federally-funded training programs, and private schools.

   Hundreds of quick-start, short-term training programs are conducted annually, many as a part of the Industry Training Services (ITS) program provided through the Arizona Department of Education or funded by the federal Job Training Partnership Act (JTPA) administered by the Arizona Department of Economic Security.

2. Advanced and Technical Training
   Business and industry look to the community colleges for advanced and technical training. Community colleges continue to improve in their ability to satisfy this need.

   One example that is typical of this effort is the Automotive Technician Seminars conducted for master mechanics by Glendale Community College in cooperation with General Motors, Ford Motor Company, the Independent Automotive Service Association, the Service Station Dealers of Arizona, the Automotive Service Council, and Industry Training Services.

3. Retraining and Upgrading the Workforce
   Today's community college student is older and most likely working while developing new knowledge and skills for a promotion, new career, or continued employment in an industry of rapid technological change. Community colleges utilize numerous nontraditional methods to meet the needs of an ever-changing and more demanding job market.

   Often, maximum accessibility is achieved through training at the employer's place of business or through the use of telecommunications. The time factor has also been conquered--to the advantage of the students and business needing a tailored course. Through "open entry/open exit" and "short term" course modes, training can be started at any time during the calendar year and be completed--and credits given--as soon as the student can prove competency. Today's training can be as immediate, accessible, and innovative as demanded by the student and/or the employer.

4. Linkages with Business and Industry
   Frequent interaction and long-term partnerships with business and industry

are critical to ensure that occupational training serves the current and future needs of the workforce.

Community colleges meet regularly with representatives of business, industry, and government through local advisory groups and organizations such as the Arizona Association for Industrial Development, Chambers of Commerce, and Private Industry Councils.

One example of a linkage for the sharing of resources is the machining program conducted by Cochise College in a classroom provided by Inland Motors Company at their Sierra Vista plant.

5. Linkages with Secondary Schools
Through almost 200 formal cooperative agreements, community colleges and secondary schools are working together to enable students to transfer vocational competencies attained in high school to the college without having to duplicate time and effort. County-wide vocational education planning is ongoing in all counties.

New state legislation (H.B. 2214) allows for the joint construction and operation of vocational facilities designed and located to serve both levels of students. A community college and secondary district are currently planning for construction of such a facility.

6. Faculty and Staff Updating
Community colleges utilize a variety of methods to provide occupational faculty with opportunities to continually update their knowledge base to enable them to deliver state-of-the-art training. While utilizing partnerships with business and industry, updating opportunities are provided through industry-education cosponsored seminars, work experience, vendor workshops, cross-training, and employee exchange.

The State Board has funded four faculty upgrading workshops, including one for prison program instructors which annually serves more than 1,500 incarcerated adults.

7. Accountability
The state's community college system is committed to accountability. While the ultimate accountability for occupational education is whether or not students obtain work as a result of their training, other measures are also necessary.

The State Board, in a cooperative effort with the districts, is working toward an accountability system which includes program and course competencies, business-industry verification of competencies, documentation of skills mastered, state funding for completers only (currently in effect for skill centers), adherence to program standards, prioritizing of programs for funding purposes, and student follow-up in relation to job placement.

The newly published "Study of Public and Private Postsecondary Instruction Vocational Education Program Completers," by the Arizona Center for Vocational Education at Northern Arizona University, is an attempt to measure the effectiveness of postsecondary vocational education programs in Arizona. This annual survey, mandated by S.B. 1352, is somewhat limited in process and data base. Through annual refinement, it has the potential to provide more reliable information for prospective students and comparative data for accountability purposes. Additional follow-up is conducted annually at the state and local levels regarding the outcomes of individual programs.

These seven areas of emphasis reaffirm the community college commitment to quality occupational education in Arizona.

We believe the most cost-effective way to meet the current and future training needs of Arizona is to capitalize on the existing investment in community college occupational training, services, and facilities.

Gordon Hall
Associate Director
State Board of Directors for Community
Colleges of Arizona

Career Development for Teachers

For several years now, Americans have been engaged in a spirited debate over the quality of education offered by our nation's public schools. This debate has covered a wide range of subjects and has generated a variety of proposals for reform. The "issue of standards" has been one topic addressed by most reform efforts. Discussions of standards have ranged from requirements for graduation from high school to colleges of education and has included discussion of recruitment, certification, evaluation, and compensation of teachers. Virtually every "reform" recommendation has been justified on the grounds that it would "raise standards" and thereby improve the quality of public education.

The Arizona Education Association supports the Career Development Model as explained below. This support is based on the belief that education reform should attend to the question of how compensation and the school environment support or hinder effective instruction, constructive relationships between teachers and students, collegial relationships among teachers, growth opportunities for teachers, and the proper role of school administrators. Efforts for reform in education should be focused then on the following factors and based on the best education research available:

ATTRACTION
--of high quality and more individuals into the teaching profession.

RETENTION
--of good teachers in the profession.

MOTIVATION
--of teachers to improve teaching skills.

The design of a career development model is based on the belief, along with supportive research, that teaching is a complex process that occurs in situations that vary widely and unpredictably. Career development looks at the work teachers do, their professional change over time, and the skills they need to do the job.

Career development is a conceptual framework that defines the occupation of teaching as a single, unified professional occupation. It describes teaching not only as an occupation, but also as a career that develops in stages over a period of time. In a career development model, teachers are identified as decision makers and the model regards decision making as the core skill of the professional practitioner. At least one source estimates that teachers make on the average one decision every two minutes.*

Career development can also be viewed as an alternative approach to compensation reform. In theory, it can achieve what merit pay and career ladders have not been able to achieve. Career development never loses sight of teaching as the focus of both the occupation and the career. Career development defines clearly the work that teachers do in terms not only of why they do what they do, but also in terms of skill needed to do the job. Career development defines professional growth more clearly than any other approach and assures that such growth, while advancing a career, need not remove teachers from their classrooms.

Within the career development model, the occupation of teaching is comprised of multiple roles. A role is a pattern of tasks. The roles within career development are:

INSTRUCTION--this role concerns the content of instruction and incorporates state, district, and subject area goals; subject content; and student knowledge and skill.

CLASSROOM MANAGEMENT--this role includes instructional techniques, the coordination of human and material resources for the classroom, and the promotion of an environment conducive to learning.

COUNSELING--this role includes meeting individual and group academic needs and motivational techniques.

The occupation of teaching is also comprised of multiple functions. A function is an action or behavior viewed as a process that involves more than one step or is continuous. The three functions within career development are:

PLANNING--encompasses methods devised for doing something or for achieving some end.

IMPLEMENTATION--refers to the action stage of a plan in which a teacher gives it practical effect.

EVALUATION--means the review of plans and action to determine the degree of success.

Teaching is a complex occupation. Its complexity increases when one considers the various skills teachers need to execute each function and fulfill each role. Figure 1 depicts this complexity.

The roles and functions of teaching and their nine skill areas describe the occupation of teaching. The grid portrayal describes the work that teachers, all teachers, do. The description is true, whether a teacher has taught three years or 30 years, teaches in an elementary school or a secondary school, or teaches physical education or American literature.

In career development, teaching is regarded not only as an occupation but also as a career. When teaching is the occupation of an individual's working history rather than one in a series of occupations, a teaching career exists. Teaching as a career is the second concept of career development.

When teaching is viewed as a career, changes in professional practice become evident. The roles, functions, and skill areas that describe teaching as an occupation remain constant; but the practice of teaching changes. This change is

Figure 1
Basic Career Development Framework

Decision-Making Roles	Decision-Making Functions		
	Planning	Implementation	Evaluation
Instructional	Instructional Planning Skills	Instructional Implementation Skills	Instructional Evaluation Skills
Classroom Management	Management Planning Skills	Management Implementation Skills	Management Evaluation Skills
Counseling	Counseling Planning Skills	Counseling Implementation Skills	Counseling Evaluation Skills

called development. The idea of career development presupposes that the practice of teaching changes over time in much the same way as the practices of other professionals such as doctors, lawyers, and architects change. These changes occur in stages called:

1. Establishment
2. Adaptation
3. Extension

Upon entry into the profession and during the Establishment stage, teachers apply their basic knowledge and skills in practice and establish themselves as professional practitioners. As they gain experience, they adapt their basic knowledge and skills to the constantly changing conditions of classroom life. This Adaptation stage is characterized by variation and integration of professional knowledge and skill. In time, teachers acquire professional power that enables them to extend their knowledge and skills through leadership and innovation. Figure 2 portrays this concept.

From this portrayal, it is evident that teaching can be both an occupation and a career wherein teachers can experience growth and challenge without having to leave the profession.

A career development model also contains four other components: Professional Growth, Evaluation, School Environment, and Compensation.

PROFESSIONAL GROWTH

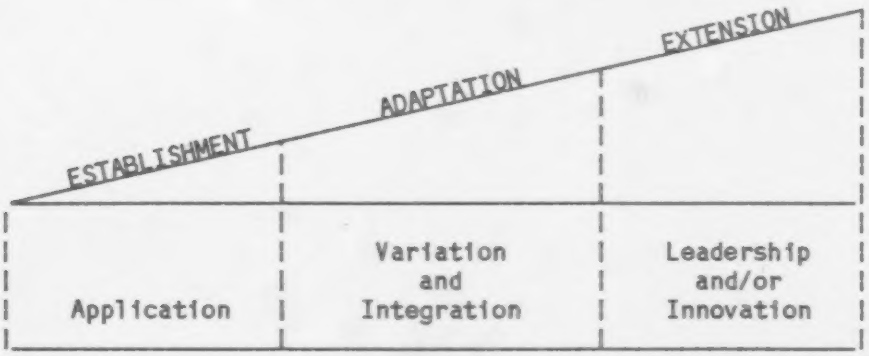
Professional growth is a process of establishing, adapting, and extending one's skills and knowledge as a teacher. Professional growth must be continuous and integrated into the workday of the teacher. Professional growth is a planned, purposeful, and deliberate activity to improve an individual's performance on the job. The training must be relevant and flexible enough to allow teachers to adapt it to their classroom needs. Teachers must identify their own training needs and be committed to change.

EVALUATION

In education, two kinds of personnel evaluation may occur, summative evaluation and formative evaluation. Summative evaluation occurs at the end of some general effort such as at the end of the probationary period. Information gathered for summative purposes is designed to serve personnel decisions made by an external audience such as the principal. Personnel decisions include the selection, placement, promotion, or dismissal of individuals.

Formative evaluation occurs during a period of activity in order to enhance acquisition of skills. Information gathered during formative evaluation is designed to serve the needs of the teachers engaged in the process. The formative decisions made by teachers may address their specific skill strengths or weaknesses and may be used to

Figure 2
Levels of Career Development



design a range of professional development activities for an indivdual teacher or group of teachers.

SCHOOL ENVIRONMENT

An effective school system is dependent upon the school environment. An attempt to manipulate one component of this system such as the physical plant or instructional resources impedes rather than promotes the achievement of an effective educational system. Past attempts at educational reform have failed to take into account the interdependency of all components in the school environment. If the career development model is to be successful in implementation, changes in the school environment must occur.

A well-drawn portrait of an effective school would show many distinct features. Among these are:

1. Effective school-site management.
2. Instructional leadership.
3. Staff stability.
4. Curriculum articulation and organization.
5. Schoolwide staff development.
6. Parental involvement and support.
7. Schoolwide recognition of academic success.
8. Maximized learning time.
9. District support.

COMPENSATION

Beginning salaries for public school teachers are not competitive with salaries offered to comparably educated graduates by private industry. In all the research on attraction of teachers to the profession, starting salary is an important factor.

The minimum salary for all full-time teachers needs to be increased to $22,000 in 1987-1988.

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[*] Christopher M. Clark and Penelope L. Peterson, "Teachers' Thought Processes" in Merline C. Wittrock (ed), Handbook of Research on Teaching, 3rd ed., Macmillan Publishing Co., New York, 1986, p. 274.

Nancy Whitaker
Program Director, Profession Development
Arizona Education Association

Case History of a Successful Supported Employment Program

Supported Employment is a concept of vocational training and employment for physically and mentally disabled persons designed to help them get and keep jobs in the community. Arizona is one of only ten states participating in a federally-funded demonstration project for Supported Employment. The project targets four client populations (developmentally disabled, brain injured, chronically mentally ill, and severely physically disabled) creating work opportunities with ongoing support provided after placement.

Nationally, sheltered workshop programs are beginning to expand or convert their programs to a community-based supported work model. New agencies have been started specifically to create and to promote Supported Employment opportunities. One such organization is Dorothy Kret and Associates, Inc. (DKA), a community-based employment training firm with experience in Supported Employment programs.

According to Dorothy Kret, president of DKA, "The first goal is to prepare our clients for a private-sector job while they are with us. Our handicapped clients come to us with a real enthusiasm to succeed on their jobs and to be independent, but with little practical job experience. Though they support hiring the handicapped, many private employers will not take a chance on someone who has not proven themselves in the job market. Our job is to prepare the client for work by teaching specific job skills and appropriate work behaviors."

DKA operates work stations in grocery stores, hotels, and janitorial firms in Maricopa and Pima counties. At a Basha's Market in Phoenix, one of Kret's trainees patiently "faces" canned goods--turns the labels to the front and moves them forward on the shelf. She takes pride in the way the aisle looks when she completes the task. Another, whose favorite job is vacuuming, works for Tucson's Mr. Janitor, cleaning a bank building.

"The approach for finding appropriate jobs is to look for the repetitive but essential tasks that exist in many businesses that employers can't keep filled with good people. Some jobs are ideal for the developmentally disabled, since the routine is a good learning tool and there is little burnout among employees," says Kret. "Entry-level positions in data entry are a good way for persons with limited mobility to start a career and show what they can do."

By providing on-site supervisors to work with trainees, DKA's host employers are guaranteed of quality. Work-site supervisors help the existing employees relate to their new co-workers, assist with job-site modifications, and make sure everything runs smoothly."This is a cooperative effort," she says. "Basha's is in the grocery business; we are in the training business."

The search for job sites in the private sector is highlighted by the need to find employers who can support an in-house program. Basha's has 44 stores throughout Maricopa County. DKA provides training at two stores and helps to arrange for clients to be hired permanently in stores nearer their homes. The agency provides a job coach to follow up and assist the client's transition to the new position.

Dealing with the government is, by nature, complicated. Most Supported Employment programs deal with the red tape by performing all of the interface work with the state and federal agencies. "We handle all the paperwork--Department of Labor Special Worker Certificates (which enable us to start trainees at a wage rate less than the federal minimum), time studies, training reports, etc. And when you choose to hire a trained program participant, we will arrange for the maximum employer incentive," Kret says.

The program is responsible for all aspects of the client's training. Host companies are billed each pay period for client costs. DKA handles the computation of salaries and the issuance of checks. The firm also names the host as additional insured on its general liability insurance; covers the trainees' employee-related expenses (FICA, FUTA, UI, and Workers'Compensation); and pays for the on-site supervisors.

DKA supervisors necessarily become experts in the particular work stations to which they are assigned. "The purpose for the program is to help people become valuable employees. The work-site jobs are the means to that end. Therefore, each supervisor must understand the technical aspects of each trainee's job, how it relates to the company as a whole and to the industry itself," Kret says.

At the Westward Look Resort in Tucson, a full-time supervisor oversees eight clients in houskeeping, kitchen, banquet, and landscaping tasks. She is able to operate several types of equipment, assist with scheduling employees, and prepare for the daily routines and needs in each of the four departments.

Each trainee's productivity is regularly assessed to determine wages that are based on the employer's hourly rate for the job measured against the client's degree of normal worker production. Performance evaluations are conducted by the supervisor who also has the responsibility for breaking down complicated jobs into routine tasks that can be memorized and mastered.

The work site supervisors are clearly essential to the program's success, and for that reason, DKA invites the host employers to participate in their hiring.

Job performance and appropriate behaviors are stressed throughout the training process. Clients learn early that punctuality, proper grooming, and task completion are expected. Regular team meetings of clients and supervisors are held. Monthly achievement awards are made to clients who meet or surpass performance goals or have graduated to independent employment.

Nine DKA clients have been hired into permanent positions during the past year, all in jobs with the businesses where they had been initially trained. One of DKA's graduates, who is employed as a laundry-room worker in a Scottsdale-area resort hotel, was rated at more than 100 percent of normal worker production before he completed the training component of his work experience. Although he had limited prior job history, the program gave him the opportunity to learn a particular skill and showcase his unusual ability to the hotel before they chose to hire him.

Some job experiences are painful, such as lay-offs due to the seasonal nature of the resort industry. "We try to plan for such situations with alternate work sites, but it's hard," Kret says. "We let the clients know that the layoff isn't their fault and is only temporary. But like other workers, being laid off only sharpens their desire to work."

The program remains involved in the client's job after he or she is hired as a permanent employee. New skills are learned through the job coach. Problems that employees may have with other staff members, changes in bus schedules, or personal difficulties that affect job performance can be handled through regular job-site or home visits. The common bond of each of the Supported Employment programs throughout the country is this provision of ongoing support services.

"The cost of a Supported Employment program is bound to save taxpayer dollars. Studies have shown that for every $1.00 spent on vocational programs, taxpayers realize an $11.00 savings. It will cost a lot less over time to have us keeping our eyes on successfully-placed clients and running interference than to have them receiving benefits, losing their jobs, and recycling throughout the system," says Kret. "Our clients are those that have been traditionally thought of as unemployable when, with our support, they can be productive citizens."

What kind of future does Supported Employment have? On this subject, Kret is very enthusiastic. "Even if there were no reduction in the money for vocational training, Supported Employment would be a good idea. With the cutbacks, programs like this are even more essential. The one way we can really strike a partnership with the private sector that will provide the opportunity for jobs and job training is to make Supported Employment a good deal for them as well as the clients."

Is there a downside to Supported Employment? Clearly it is not an appropriate placement for every disabled person. A work program cannot replace competent case management, nor can it solve all of the problems of socialization facing some disabled people. DKA's clients do show a marked increase in appropriate behaviors in the program, but she admits to the need for continued support from outside the workplace. Group homes, advocates, guardians, and others must still assist in the support. Although it replaces some of the conventional services for the disabled, the Supported Employment concept complements the system by providing a next step for those persons who can develop the necessary life and job skills.

And what do Kret's clients think of Supported Employment? One of her clients who had successfully completed training and had been hired at a hotel was asked that question by a newspaper reporter. He answered, in a friendly, though insistent fashion, "Can you wait a few minutes? I have to run this load up to the third floor."

Michael Lex
Dorothy Kret and Associates, Inc.

New OIS Reports for Career Counselors and Vocational Education Planners

The Occupational Information System of Arizona (OIS) has released the following new reports:

1. "1985 Arizona Apprenticeship Data by Training Program (CIP) Code and by County" (OIS Report #86-4)

2. "1985 Arizona Proprietary School and Community Based Organization (CBO) Enrollments and Completers by Vocational Training (CIP) Program and County" (OIS Report #86-5)

3. "1985 Job Service Data - Statewide" (OIS Report #86-7-ST)

4. "1985 Job Service Data - Maricopa and Pima Counties" (OIS Report #86-7-MP)

5. "1985 Job Service Data - All Counties Except Maricopa and Pima" (OIS Report #86-7-BOS)

The apprenticeship report provides information on enrollments, new registrants, completers, cancellations, and ending actives. Training is classified by the Classification of Instructional Programs (CIP) vocational training areas. The proprietary school report provides information on enrollments and completions for CBOs and proprietary schools. The proprietary school enrollments are broken into in-state and out-of-state and are by CIP vocational training area.

The Job Service reports provide detailed information by the Dictionary of Occupational Titles (DOT) occupational classifications relating to job openings, job applicants, job placements, and wages offered by employers.

For occupations and training areas referred to in the above reports, detailed demand and training information can be obtained through the MICRO OIS of Arizona.

Copies of these reports and information on accessing the MICRO OIS can be obtained by writing or calling Hugo H. Soll, OIS Manager, ASOICC/Research Administration, P.O. Box 6123 (Site Code 897J), Phoenix, Arizona 85005. Telephone: (602) 255-3680.

Hugo H. Soll

ASOICC Resurrects Occupational Briefs

The Arizona State Occupational Information Coordinating Committee (ASOICC) has resurrected the former "Arizona Occupational Guide"--produced and distributed by the Labor Market Information staff through 1979--as the "Arizona Occupational Brief." The one-page briefs will provide current information concerning job description, training and qualifications, salary, lines of advancement, employment outlook, and additional information on selected occupations in Arizona. Briefs have been printed, or are in the process of being printed, covering jobs as secretary, receptionist, registered nurse, licensed practical nurse, and groundskeeper. Additional briefs will soon be available for the occupations of plumber, cement and brick mason, and heavy equipment operator.

The briefs are distributed primarily by the Arizona Department of Education, but they will also be available on request to the ASOICC Office at 255-3680.

Stan Butterworth

Statistics--Arizona Education

Statistics in Education
(Grades K-12)
1984-85

Number of Pupils Enrolled in Public Schools	577,492
Number of Pupils Enrolled in Private Schools	51,596
Total State Enrollment	629,088
Number of Public Schools	909
Number of Private Schools	375

Public Schools

Number of Classroom Teachers	28,988
Female = 69% Male = 31%	
Total Expenditures (all education programs)	$1,750,806,471
Average Cost per Pupil	$3,150.91
Revenues:	
State Aid	51.99%
Local Support	24.93
Federal Aid	6.29
County Aid	3.99
Other	12.80

SOURCE: Arizona Department of Education, September 1986.

Enrollment in Arizona Public Universities and Community Colleges
Fall 1985

	Total Students (Headcount)	Total Students (FTSE)*
Public Universities**		
Arizona State University	38,029	29,646
ASU West	2,529	695
Northern Arizona University	12,615	10,319
University of Arizona	30,374	25,411
Subtotal	83,547	66,071
Public Community Colleges***		
Arizona Western College	3,911	1,766
Central Arizona College	4,504	1,809
Cochise College	3,939	2,086
Eastern Arizona College	3,692	1,743
Glendale Community College	13,377	6,096
Maricopa Technical Community College	2,765	1,128
Mesa Community College	16,789	7,814
Mohave Community College	3,162	1,041
Northland Pioneer College	5,260	1,505
Phoenix College	11,592	5,398
Pima Community College	20,409	9,413
Rio Salado Community College	12,057	2,794
Scottsdale Community College	7,809	3,622
South Mountain Community College	1,443	611
Yavapai Community College	5,191	1,610
Subtotal	115,900	48,436
Grand Total	199,447	114,507

*FTSE=Full-Time Student Equivalent=Total number of credit hours divided by 15.

**SOURCE: Arizona Board of Regents, August 1986.

***SOURCE: State Board of Directors for Community Colleges of Arizona, September 1986.

State Appropriations for Higher Education
1985-86
(in thousands)

	Appropriations 1985-86	2-Year Change
University of Arizona	$186,428	+26%
Arizona State University	136,754	+31%
Northern Arizona University	48,109	+27%
Community Colleges	57,410	+29%
Other Appropriations	3,641	N/C
Total	$432,342	+28%

How Arizona Ranks Among the 50 States

1985-86 Appropriations		Appropriations Per Capita		Appropriations Per $1,000 of Personal Income		2-Year Change Less Inflation		10-Year Change Less Inflation	
Amount	Rank	Amount	Rank	Amount	Rank	Percent	Rank	Percent	Rank
$432,342,000	25	$142.86	16	$11.96	16	+18%	8	+25%	20

N/C--Not Comparable.

SOURCE: The Chronicle of Higher Education, October 30, 1985.

Tuitions and Fees at Arizona's Colleges and Universities

	1985-86	1986-87	
	Tuition and Fees	Tuition and Fees	Out-of-State Tuition
American Indian Bible College	$2,162	$2,222	$ 0
Arizona College of the Bible	2,900	3,290	0
Arizona State University	990	1,136	3,125
Arizona Western College	384	384	3,216
Central Arizona College	480	510	3,720
Cochise College	510	510	2,430
College of Ganado	1,164	2,700	0
DeVry Institute of Technology	3,740	3,846	0
Eastern Arizona College	416	512	2,352
Embry-Riddle Aeronautical Univ.-Prescott	3,780	4,080	0
Grand Canyon College	2,810	3,085	0
Maricopa County Community College District	480	548	3,090
Mohave Community College	292	294	2,364
Navajo Community College	770	770	0
Northern Arizona University	990	1,136	2,556
Northland Pioneer College	120	120	2,180
Pima Community College	408	408	2,088
Prescott College	4,275	4,575	0
Southwest Conservative Baptist Bible College	2,860	3,160	0
University of Arizona	990	1,136	3,124
Western International University	2,250	2,850	0
Yavapai College	540	500	3,410

SOURCE: The Chronicle of Higher Education, August 6, 1986.

New Developments

At least $100 million in building is underway that will change the complexion of the Arizona State University (ASU) campus during the next three years. The first project, already completed, was a $3.9 million, three-level parking garage at College Avenue and Apache Boulevard. It provides 1,567 spaces at a charge of $90 per year.

A four-level parking garage at McAllister Avenue and Tyler Street providing 823 spaces is scheduled for completion in February. By June 1987, a third parking garage will be built on the western end of campus behind the Tempe Center.

Other projects in the construction program include an $8 million expansion of Sun Devil Stadium, a $15 million Fine Arts Complex, an $11.5 million expansion of Hayden Library, a $20 million student-recreation complex, and a $10 million Student Services Building.

The University of Arizona (U of A) will sell nearly 96 acres of farmland located near Mesa's Tri-City Mall for $12.2 million to Main Street Mesa Associates under a tentative agreement. If the sale is approved by the State Board of Regents, the money will become an investment for the U of A agricultural-endowment fund.

Main Street Mesa Associates hopes to develop the land into light-industrial and commercial use. The U of A will retain 15 acres on the site for the Urban Horticulture and Landscape Design Center. The former research farm is bounded by Alma School Road on the east, Dobson Road on the west, Main Street on the north, and Broadway Road on the south.

The Center for Advanced Purchasing Studies, a new research institute devoted to the study of purchasing, will open October 1 at Arizona State University Research Park, five miles south of the main ASU campus in Tempe. The Center, a joint venture between the ASU College of Business and the National Association of Purchasing Management, will look at purchasing and materials management as they relate to business needs and will be funded privately through corporate and individual contributions.

Maryvale High School, in west Phoenix, is one of 28 schools selected nationwide to participate in a three-year school-improvement project called Mastery in Learning. The program, sponsored largely by the National Education Association, provides the schools with about $28,000 annually to promote teacher decision-making in changing and improving school and district policies. The money will be used for materials and programs that teachers want to use and implement.

The Mastery in Learning project was started last year in five pilot schools. This year, 700 elementary, junior high, and high schools applied for the program, with 28 schools selected. The schools were chosen based on the racial, ethnic, and socio-economic diversity of its student body.

Arizona State University has opened its Downtown Center in a part of the former Phoenix Union High School campus at Seventh and Van Buren streets. The Downtown Center consolidates at a single location the classes that ASU has been offering downtown in various government conference rooms for years. This Center gives the university a headquarters in Phoenix's business and governmental center.

Most of the 100 students currently attending classes at the Center are downtown workers taking night classes to complete master's degrees. For now, most of the classes are in government and business. Bette DeGraw, director of the Center and former deputy director of the state Department of Economic Security, said that future course offerings will be tailored to meet the needs of downtown workers. However, she expects the Center to stay with traditional academic offerings, rather than offer recreational classes such as aerobics.

Arizona Labor Market Newsletter
LABOR MARKET INFORMATION PUBLICATIONS
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